DEC 17 19

EDUCATIONAL SCREEN

THE MAGAZINE DEVOTED TO AUDIO-VISUAL AIDS IN EDUCATION

PERIODICAL ROOM
GENERAL LIBRARY
UNIV. OF MICH.

25¢ A COPY $2.00 PER YEAR

DECEMBER, 1941

WE REPEAT! HERE ARE

Today's BIGGEST BARGAINS *in*

16mm. SOUND CLASSROOM FILMS

only $1.00 *per reel for two days* *

DE VRY 16mm. sound and silent classroom teaching films are being used by accredited schools everywhere. Complete with Lesson Plans prepared by eminent authorities, these films will enhance the teaching of Geography, Science, History, Literature, Nature Study, etc.

Only $1.00 per Reel for 2 Days Rental when 20 or More Subjects Are Selected for Extended Program.

DEFENSE TRAINING FILMS

Schools participating in defense training, in which a knowledge of electricity is needed, are eligible to acquire the six film subjects below with funds provided by Appropriation Act 146 of 77th Congress. Contact your State Director of Vocational Training. Films were screened by U. S. Office of Education and are in its reference list.

Principles of Magnetism
Principles of Electromagnetism
Principles of Current Electricity
Principles of Electrical Measurement
Principles of Electrostatics
Principles of Current Generation

16mm. Sound or Silent

SCREENING PRIVILEGES!
FULL DETAILS ON REQUEST

DeVry "Interpreter" 16mm. Sound Film Projector (Dual Case)

DeVry 16mm. Sound Projectors

DeVry builds 16mm. projectors for every school need. Each is precision made for long lasting dependable service by the same skilled craftsmen who build the world famous DeVry 35mm. Theatre Sound Projectors, of which over 400 were ordered by the U. S. Navy. Descriptive literature gladly sent.

Here Are Just a Few Superb Films from the DeVry School Film Library

ARCTIC THRILLS—A great adventure picture. Beautiful sea and ice scenes. Actual portrayal of the capture of a giant polar bear.

ANIMAL BABIES—The young of rabbits, cats, possum, goats, llama, bison, yak, kangaroo, skunk, hippopotamus, prairie dog, etc. Superb.

WILD ELEPHANT ROUND-UP—The year's greatest adventure picture. See how a wild elephant is actually cut off from the herd and captured.

THE HYDROZOA—Simple water animals and jelly fish. Excellent animations of bodily functions.

AMOEBA & VORTICELLA—Life cycle of these organisms, animations of reproduction and other bodily habits.

THE EARTHWORM—Life cycle of the earthworm. Animate studies of different bodily functions.

GARDEN SPIDERS—Intimate film study of the common spider. Life cycle, habits, mating, etc.

THE FROG—An excellent film. Careful study of the life cycle, animations of all life functions.

PLANT LIFE—How plants grow, development of root, stem and flower. How plants feed.

EROSION—Effect of wind, water and weather upon the surface of the earth. Grand Canyon and Bryce Canyon as examples.

OUR GOVERNMENT—Depicts the history of the formation of the U. S. Government, explains functions of each branch as a system of balance and counter-balance.

THE PIONEERS—Portrays life of early pioneers. Candle making, pewter pouring, log cabins, fireplaces, tanning hides, wheelwright, etc. Authentic scenes from priceless master prints.

LIFELINE OF THE BRITISH EMPIRE—Suez, Malta, Gibraltar, Canal scenes, Port Said, the part this strategic Canal and Gibraltar play in defense of British Empire.

GOLD RUSH—Discovery of gold at Sutter's Mill, California, early mining methods, modern mining equipment and methods of extracting gold.

RAFFLES AND RUBBER—Mighty Singapore. Views of city, natives gathering rubber, inland scenes.

SEA GOING THRILL—Trip by Clipper ship from New York around Cape Horn, up west coast of South America into the harbor at San Francisco.

CZECHOSLOVAKIA—Before the German invasion of 1939. Pictures people, carefree and happy. Film will perhaps have historical significance.

FILM CATALOG FREE ON REQUEST

Filmsets ON WORLD GEOGRAPHY

One of the greatest forward strides in Visual Education. A complete library of 48-16mm. film subjects to be owned by individual schools for classroom use. Devised to TEACH STUDENTS TO THINK. Teachers' Manual of 112 pages, with 672 illustrations taken from the films and steel film filing cabinets complete the unit. The cost is moderate. Descriptive literature gladly sent.

PROTECT *Your Films* with "SAVE-KOTE"

SPECIAL FILM TREATMENT

At a cost of but a FRACTION OF A CENT PER FOOT, your black and white or color films if processed with DeVry "Save-Kote" will last longer, give clearer projection and be protected against scratches, dirt, wear, climate and finger marks.

Free Trial Offer! To prove "SAVE-KOTE" is all we say it is, we'll process a 400 ft. reel of film FREE!

Visual Education Headquarters Since 1913

DEVRY CORPORATION

DEVRY FILMS AND LABORATORIES

1111 Armitage Ave.
Chicago, Illinois

New York **Hollywood**

TWO TIMELY CASTLE FILMS EVERY SCHOOL CAN OWN!

INSTRUCTIVE–INEXPENSIVE!

"FOOTBALL THRILLS OF 1941"

BETTER than a midfield seat as the most prodigious passes and sensational runs of these great gridiron contests of 1941 are replayed on one's own screen . . . a flashing review of the best the season produced . . . a classic American sport on film . . . for thrill . . . for pleasure . . . for study!

Re-live the throng-gripping thrills of stellar plays in these great games!

ARMY — NAVY
COLUMBIA — PRINCETON
ST. MARY'S — DUQUESNE
FORDHAM — SO. METHODIST
HARVARD — YALE
DUKE — GEORGIA TECH
NAVY — NOTRE DAME
MINNESOTA — NORTHWESTERN
PRINCETON — YALE

8 mm. or 16 mm.

OWN HISTORY, FILMED AS IT HAPPENED!

U. S. in Iceland!
Balkans Invaded!
U. S. Destroyer Hit!
U. S. Defense Grows!
Russia's Fight!
France's Tragic Fate!
"Bismarck" Destroyed!
Tobruk Holds Out!
Syria-Iraq Taken!
Roosevelt-Churchill Meet!
Canadians Smash Spitzbergen!
Other outstanding world events!

"NEWS PARADE OF THE YEAR 1941"

Now every projector-equipped school can own and screen this movie-reporting of history-in-the-making! The world's news fronts in a terrific year recorded for all posterity! In your own school classes, re-enact these globe-shaking events, all in one movie! A powerful, supplementary aid in the teaching of current history!

OWN THESE GREAT MOVIES FOR LESS THAN THE COST OF UNEXPOSED MOVIE FILM!

16MM. SILENT . . . . . 360 FT.	$8.75
16MM. SOUND . . . . . 350 FT.	17.50
8MM. SILENT . . . . . 180 FT.	5.50

USE THIS TODAY

SEND THIS ORDER FORM TO YOUR VISUAL AIDS OR PHOTOGRAPHIC DEALER TODAY!

OVER 100 CASTLE FILMS' SUBJECTS

CASTLE FILMS

(YOUR DEALER'S NAME AND ADDRESS)

Please send me the Castle film(s) checked below in size and length indicated:	16 mm. Silent 360 ft. $8.75	16 mm. Sound 350 ft. $17.50	8 mm. 180 ft. $5.50
"FOOTBALL THRILLS OF 1941!"			
"NEWS PARADE OF THE YEAR 1941"			

Remittance Enclosed Herewith ☐ Ship COD ☐

NAME

ADDRESS

CITY STATE ES-12

WITH you, as with us, *defense comes first*. Our output of optical instruments is being rapidly increased to meet the defense emergency. We will endeavor to give our customers the best service possible under existing circumstances, and ask your sympathetic cooperation.

THE challenge of the War Department finds one answer in the words of Edward Bausch when he says, "My associates and myself have obligated this company to a program that eclipses in magnitude and speed all previous efforts."

This pledge is underlined and italicized three times every twenty-four hours by the long lines of workers in each change of shift. Every resource and facility gained in filling the diverse optical needs of education, research and industry is being concentrated in maintaining an unbroken flow of optical instruments to America's front lines of defense and to America's defense industries.

Many are the Bausch & Lomb products that help to "keep 'em flying." There are bubble octants for aerial navigation; photo lenses for mapping and reconnaissance, height finders, searchlight mirrors and flank-spotting scopes for anti-aircraft defense; binoculars for spotters; Ray-Ban Glasses for fliers.

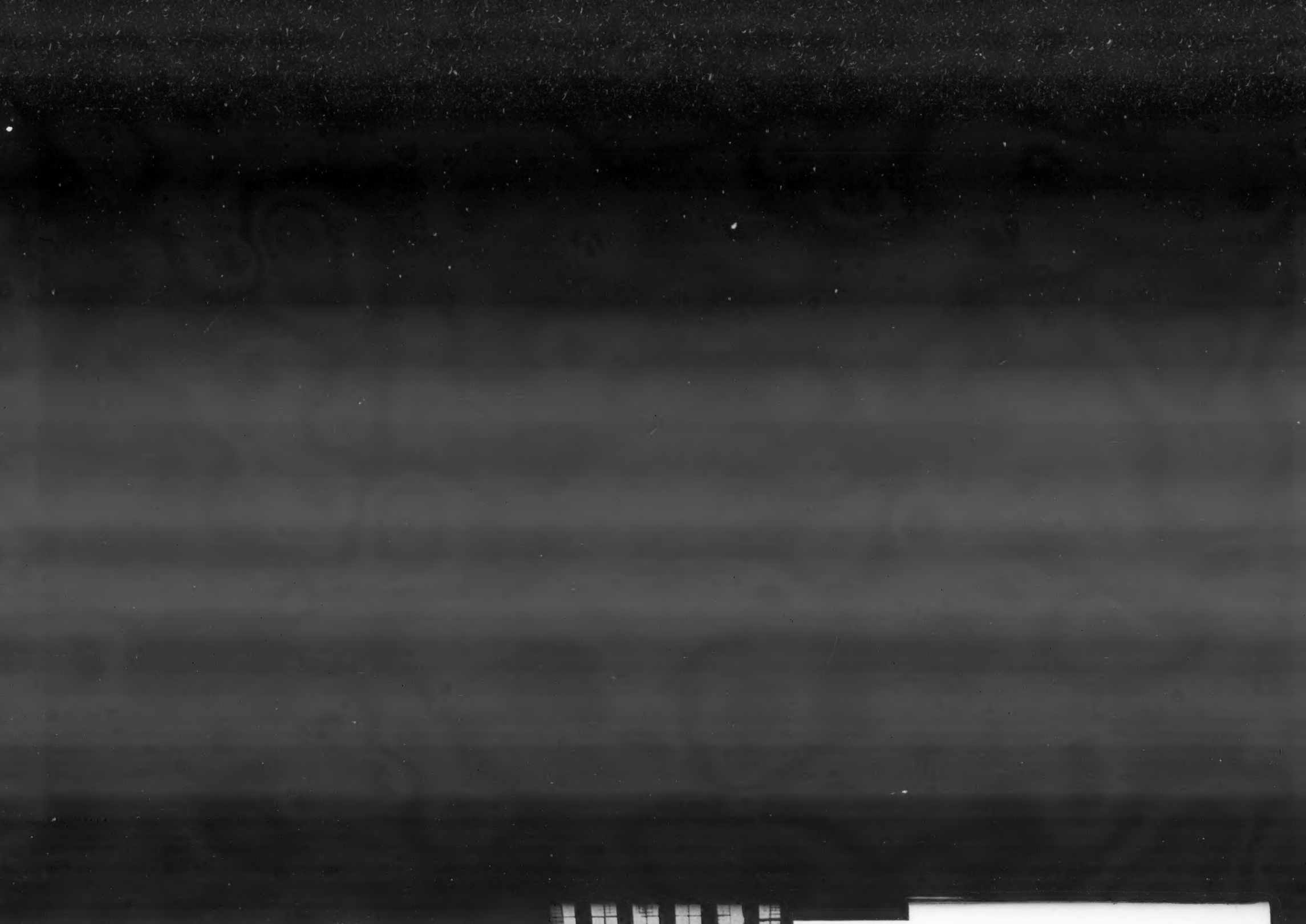
The accepted optical aids to industry developed by Bausch & Lomb—the Contour Measuring Projector, the Metallographic Equipment, the B & L Littrow Spectrograph—are now in the first line of production, doing important work in keeping them flying.

BAUSCH & LOMB

OPTICAL CO. • ROCHESTER, NEW YORK

ESTABLISHED 1853

AN AMERICAN SCIENTIFIC INSTITUTION PRODUCING OPTICAL GLASS AND INSTRUMENTS FOR NATIONAL DEFENSE, EDUCATION, RESEARCH, INDUSTRY AND EYESIGHT CORRECTION



The EDUCATIONAL SCREEN

THE EDUCATIONAL SCREEN
Staff

NELSON L. GREENE - - - *Editor-in-Chief*
EVELYN J. BAKER - *Advertising Manager*
JOSEPHINE HOFFMAN - *Office Manager*

Department Editors

WILBER EMMERT - - - - Indiana Pa.
HARDY R. FINCH - - Greenwich, Conn.
JAMES D. FINN - - - - Greeley, Colo.
ANN GALE - - - - - - - Chicago, Ill.
DAVID GOODMAN - - New York, N. Y.
JOSEPHINE HOFFMAN - - - Chicago, Ill.
F. DEAN MCCLUSKY - Scarborough, N. Y.
ETTA SCHNEIDER - - Washington, D. C.
W. W. WATTENBERG - - - Chicago, Ill.
DON WHITE - - - - - Atlanta, Ga.

Editorial Advisory Board

WARD C. BOWEN, Chief, Bureau of Radio and Visual Aids, State Education Department, Albany, N. Y.

MARIAN EVANS, Director, Visual Instruction Center, Public Schools, San Diego, Calif.

W. M. GREGORY, Western Reserve University, Cleveland, Ohio.

J. E. HANSEN, Chief Bureau of Visual Instruction, Extension Division, University of Wisconsin, Madison, Wis.

J. A. HOLLINGER, formerly Director, Department of Science and Visualization, Public Schools, Pittsburgh, Pa.

BOYD B. RAKESTRAW, Assistant Director Extension Division, University of California, Berkeley, Calif.

PAUL C. REED, Director, Department of Radio and Visual Education, Board of Education, Rochester, N. Y.

W. GAYLE STARNES, in charge of Audio-Visual Aids, Department of University Extension, University of Kentucky, Lexington, Ky.

LELIA TROLINGER, Secretary, Bureau of Visual Instruction, Extension Division, University of Colorado, Boulder, Colo.

W. W. WHITTINGHILL, Director, Department of Visual and Radio Education, Board of Education, Detroit, Mich.

VOLUME XX DECEMBER, 1941 NUMBER TEN
WHOLE NUMBER 197

Contents

Cover Picture— Winter Sport in Sun Valley, Idaho
(Courtesy Chicago and Northwestern Railway)

Motion Pictures Utilized in College English ..... B. F. Holland—Dora G. Netterville 418

Values of Visual Aids in Reading ..... Lawrence R. Winchell 421

Between the Lines ..... William S. Wagner 423

Education through Socially Useful Work William W. Wattenberg 425

Motion Pictures—Not for Theatres ..... Arthur Edwin Krows 427

Among Ourselves—Notes from and by The Department of Visual Instruction ..... Conducted by James D. Finn 430

The Literature in Visual Instruction A Monthly Digest ..... Conducted by Etta Schneider 431

Experimental Research in Audio-Visual Education David Goodman 434

School-Made Motion Pictures ..... Conducted by Hardy R. Finch 436

News and Notes ..... Conducted by Josephine Hoffman 440

New Films of the Month ..... Conducted by Don White 442

Current Film News 444

Index to Volume XX (1941) 446

Here They Are! A Trade Directory for the Visual Field 448

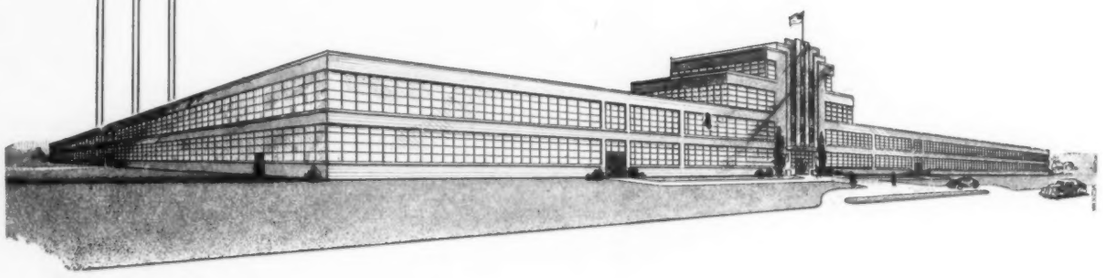
SUBSCRIPTION PRICE

Domestic $2.00
Canada $2.50
Foreign $3.00
Single Copies ..... .25

The EDUCATIONAL SCREEN published monthly except July and August by The Educational Screen, Inc. Publication Office, Pontiac, Illinois; Executive Office, 64 East Lake St., Chicago, Illinois. Entered at the Post Office at Pontiac, Illinois, as Second Class Matter.

Address communications to The Educational Screen, 64 East Lake St., Chicago, Ill.

OPTICAL INSTRUMENTS
AID DEFENSE



Spencer has greatly increased its facilities during the past two years through the erection of additional plant units and the installation of special machinery capable of greater speed and accuracy.

Yet even this great expansion is not sufficient in the present emergency. Our primary obligation of course is to meet the requirements of defense and defense industries and of public health — requirements, broadly speaking, which rightfully divert a high percentage of our output.

We are bending every effort to supply the needs of industry and science, and ask your indulgence if delays in filling your orders are causing inconvenience.

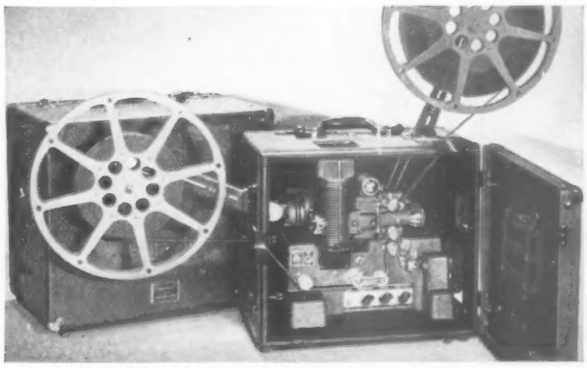
SPENCER BUFFALO U.S.A.

Spencer Lens Company
BUFFALO, NEW YORK
Scientific Instrument Division of
AMERICAN OPTICAL COMPANY

Sales Offices: New York, Chicago, San Francisco, Washington, Boston, Los Angeles, Dallas, Columbus, St. Louis, Philadelphia, Atlanta

Exclusive B&H Offering --
RECORDED LECTURES

Now available on disc records is new, vital, unduplicated supplementary educational material: the voices of today's keenest thinkers, important dramatizations, unique material for *all* age levels. These electrical transcriptions assure perfect sound reproduction, allow full flexibility as to time of use, and permit correlation by previewing as well as by repetition for review. Distributed *exclusively* by Bell & Howell. Send coupon for descriptive booklet.



FILMOSOUND "UTILITY"

For finest reproduction of 16mm. sound and silent motion pictures in classroom and auditorium. Has every wanted feature. School-proved stamina and simplicity of operation and maintenance. Price, $389.35.

EDUCATIONAL FILMS *IN COLOR*

SUBJECTS as widely divergent as Agriculture and Zanzibar are now included in the B&H Filmosound Library's fast-growing selection of educational films in *full natural color.*

A single-reel color film version of *Macbeth* is a recent acquisition well liked by educators. And the *Our Colorful World* series, in its few months of availability, has been widely praised. The color films of this series portray realistically the beauty spots and wild life of America and the world. Included are five films on U. S. National Parks and one on American *Indian Life Today.* Each of the nine new color films on wild life covers either a single species or a habitat group. Other films in color picture Mexico, Canada, Central America, Africa, and the South Seas.

For recreational use in schools, Filmosound Library again offers *color* films—27 of the finest examples of color cartoons.

Black-and-white films, of course, continue to be the mainstay of the visual education program, and the B&H Library of these films is constantly growing. Take advantage of the offer of new film catalogs which you'll find below.

3 NEW FILM CATALOGS

Just off the press—a complete catalog of Filmosound Library's vast educational film resources, arranged and rated for easy reference. In work: *1942 Recreational Film Catalog,* and *1942 Utilization Digest,* indexing and evaluating 938 films on quality, subject matter, and age level. Free to sound film projector owners; catalogs 25c each to others. Send the coupon.

NEW! U. S. Office of Education Defense Training Films

Just released for school and industrial use are the first of a series of more than fifty machinist and industrial training films, prepared under the direction of the United States Office of Education. 16mm. sound film prints are available by rental or purchase through B&H Filmosound Library. Rates represent bare print and shipping costs, as negative production was a government defense expenditure.

Bell & Howell Company, Chicago; New York; Hollywood; Washington, D. C.; London. *Established 1907.*

SEND THE COUPON FOR COMPLETE DETAILS

BELL & HOWELL COMPANY
1817 Larchmont Ave., Chicago, Ill.
Please send details on: ( ) Recorded Lectures; ( ) Filmosounds; ( ) U. S. Defense Training Films. Send ( ) Educational Film Catalog; ( ) Recreational Film Catalog; ( ) Utilization Digest.

Name.....

School.....

Address.....

City.....*State*.....ES 12-41

PRECISION-MADE BY
BELL & HOWELL

Among the films useful for English instruction are: below, "Oil for the Lamps of China," a Warner Bros. production; right, "Romeo and Juliet," produced by Metro-Goldwyn-Mayer.

Motion Pictures Utilized

Summarizing the various purposes and techniques of film use, as reported by several English professors.

B. F. HOLLAND
The University of Texas, Austin
DORA G. NETTERVILLE
The University of Texas, Austin

THE primary purpose of this article is to indicate the uses being made of motion pictures in the teaching of English in American colleges and universities. In effect, the article is intended to summarize replies to personal letters addressed to chairmen and professors of English departments in colleges and universities belonging to the American Association, the letters being designed to determine the extent to which motion pictures are being used, the various uses made of them, and how they are used in this area of teaching.

Quantitative Results

Frequency of Types of Uses. One hundred and thirty letters were sent out, and one hundred and twenty-five replies were received. It was found, first of all, that motion pictures are being used by at least forty professors of English in different sections of the United States. This is 32 per cent of the number of professors responding to the inquiry. It was also possible to discover the uses being made of motion pictures by these forty professors. Table I shows the frequency of four major uses mentioned.

TABLE I

Kinds of Uses		Frequency
1. To develop photoplay appreciation		38
2. To motivate students		
(a) in written composition	9	
(b) in oral communication	6	
(c) to do more extensive reading	5	
Total		20
3. To enrich background for literature		12
4. To vitalize instruction in		
(a) Drama	6	
(b) Theatre history	2	
Total		8
Total extent of uses		78

Other uses were mentioned by a number of professors, but those indicated in the table were mentioned most frequently.

A further study of the table will reveal that the least use made of motion pictures is that of vitalizing instruction in drama and theatre history; and that the greatest use made is that of developing photoplay appreciation. About 50% of the professors use motion pictures to motivate students in written composition, oral communication, and in extensive reading; and 30% use films to enrich their students' background for the study of English literature. Thus it appears that motion pictures are being used rather extensively in a number of important phases of English instruction.

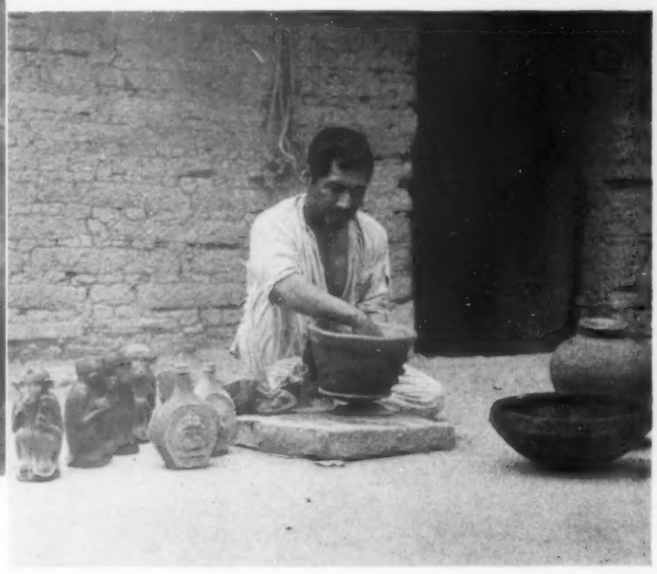
Further quantitative data were compiled showing in general where motion pictures are shown to students. Of the forty professors using films, eighteen seem to depend upon showings in local theatres, sixteen secure them for use in their classrooms, or on their campi, and the remainder depend upon chance opportunities of students to see particular pictures. Thus there seems to be a determined effort on the part of most of the professors to make a rather formal use of motion pictures for the various purposes.

How Motion Pictures Are Used for Different Purposes

To determine the manner in which motion pictures are used for the variety of purposes indicated above, it was necessary to study the plans described by individual professors and to classify the methods in a variety of ways indicated below.

Development of Photoplay Appreciation in Special Courses. One plan for developing photoplay appreciation

Examples of available films on Latin-American countries: left, an Indian type from the Bell & Howell series "Mexican Silhouette"; below, one of the "Zapotecan Potters", from the Walter O. Gutlohn film of that title.



tion, in operation in fourteen different institutions, is that of providing special courses for the study of the motion picture as an art form. One professor writes: "We try to understand pictures from the standpoint of their creators." Other professors aim at "the discriminative evaluation of motion pictures" and the development of "the ability to evaluate the current motion pictures as communicative arts."

A number of professors indicated the points of view from which photoplay appreciation is approached. A chairman in an Eastern university says, "The nature of this new art form will be discussed from the standpoint of aesthetics." A professor in the Middle West says that his course is a "study of the relation of the cinema to painting." A professor on the Pacific Coast describes an historical approach, in which he considers the outstanding stages in the progress of the art by making a survey of the contributions made from time to time by foreign producers and showing the effects their films have had on the American films. He also includes a study of the most important directors and technicians, illustrating with films appropriate for each stage of development. A professor in an outstanding college for women directs her students to the study of different types of films, including documentary, news, propaganda, and entertainment films. When possible, entertainment films are commented on in comparison with novels. Another professor emphasizes the narrative approach. He says, "We study story content, comparing with novels, plays, stories, studying how movies tell stories differently—cinematically." By using movies that "range and vary from the earliest primitives to contemporaries," he thinks that the "narrative approach is the most authentic, most useful to students." Still another professor develops "the theory used in the narrative film, the news reel, travel film, animated cartoon, and documentary film." For this purpose, he plans to use nearly 2,000,000 feet of films.

The scholarly type of instruction offered in some of the photoplay appreciation courses is suggested by a professor who requires his students to write "two full and detailed criticisms of current movies: one paper covering the various sources of reviews and evaluations of films; and a term paper on some phase of the motion picture, in which the student is particularly interested."

Other Plans for Developing Photoplay Appreciation. Eighteen chairmen and professors of English reported other plans besides college courses to develop photoplay appreciation. These plans include: (1) certain types of collaboration with local theatres for bringing good films to students and discussing the films in relevant classes; (2) sporadic endorsement of new pictures appearing in commercial theatres, with follow-up discussions; (3) recommendation of classic films with follow-up discussions in classes and informal seminars; and (4) showing of films in classrooms or at convenient places on the campus.

The most comprehensive plans reported were those that involved the projection of films in the classrooms or at convenient places on the campus.

Uses of Film for Motivation of English. Twenty professors, it will be recalled, reported the use of motion pictures for motivation purposes: nine to motivate composition writing, six to motivate oral communication, and five to motivate extensive reading.

Composition writing is motivated in both regular and special courses. One professor uses films as subjects for critical writing in freshman English. Another permits freshman students to criticize particular films, and to attempt scenario writing. Others permit students to use the content of films for theme subjects of various types. Special courses are offered from several standpoints. A professor in an Eastern university offers a course in which he teaches students "to prepare materials, factual and fictional, their own or others', for transcription into film." He also illustrates the principles of scenario writing by such films as "Let us Live," "Oil for the Lamps of China," "Life of Emile Zola."

and certain scientific and travel shorts. The head of the department in a teachers college describes an advanced course in which students write on "independent subjects, such as 'The Vamp', 'D. W. Griffith', 'The Documentary Film', 'The Abstract Film', etc." "In some cases", he says, "the ability of the student has warranted permitting him to expand his subject for the purpose of book publication."

The motivation of oral communication is likewise effected in a number of ways. In one university, a professor uses motion pictures as a basis for conversation with students during conference periods. In others, films are used to motivate class discussion of important novels and plays. The students read the books and then see the film versions, or vice versa; then they discuss both in class. In still another university, "a film or selection of a film is shown at each class session" with discussion following the screening. "Persons prominently identified with several phases of motion picture making and related arts will guide certain discussions." In another college, films are used as "springboards for discussion" of the problems of youth, in what the professor describes as a "conversation laboratory." In this, films provide students with a certain amount of "common experience" before they launch into realistic, unrehearsed discussions of problems of immediate interest to them as college students." The procedure following in the conversation laboratory involves "first, the showing of a selected ten or fifteen-minute sound film which emphasizes some particular problem in social affairs, government, or personal relationship; and second, a discussion of many related topics suggested by the film."

The use of films for the motivation of reading is not extensive, except as reading becomes necessary for the preparation of definite assignments associated with motion pictures. In several instances, professors report that students who have seen film versions of books and plays often follow up their experience by reading. In one college, 450 freshmen were encouraged to see a film version of one of Shakespeare's plays, after which most of them read the play without being required to do so. More often, however, it appears that reading particular books or plays motivates students to see the film versions.

A plan to determine the effects of motion pictures on the motivation or reading was put into operation at the Southwest Texas State Teachers College. The plan involved the use of two groups of college freshmen who were studying the Pan American Republics for the purpose of investigative writing on subjects pertaining thereto. One group of these students saw a number of color films on the Pan American Republics, and discussed the centent for the purpose of selecting theme subjects. The other group discussed the Pan American Republics for the same purpose but were not shown the films. A comparison of the reading activities of the two groups revealed that students in the film group did 20 per cent more reading and spent 20 per cent more time in the library than did the students in the non-film group. It also appeared that the students in the film group manifested greater interest in the subjects on which they were writing. Though not conclusive, the data yielded by the experiment are impressive.

Enrichment of Background for Literature. Attempts to enrich the background of students for the study of English literature, reported by twelve professors, seem to be made chiefly at the freshman and sophomore levels. One professor reported that the English Department requests the showing of film versions of books that freshman students are asked to read. Another reports "that attempts are made to gear-in a showing of feature pictures with a reading of related books," in a freshman course in English. "Tie-ups have been made with 'Romeo and Juliet', 'Mid-summer Night's Dream', 'Of Human Bondage', and others." Several professors mention the use of films in teaching Shakespeare. Use was reported of the film "Master William Shakespeare" and of films showing Shakespeare's country and scenes mentioned in his plays, as well as film versions of his plays. One professor says, "Shakespeare has become much easier to teach since one can use movie comparisons."

The use of films in teaching courses in the humanities at the sophomore level was reported by a number of professors. One professor says that "several films on musical instruments which we use every year we consider more valuable than either demonstrations or talks or pictures. There are also some films on processes in art which are useful."

Use of Motion Pictures in Drama and Theatre History. Uses of Motion pictures to vitalize instruction in drama and theatre history, reported by eight professors, include comparisons of movies and acted versions of dramas and the writing of scenarios. In one course described, about one third of the time is given to the study and analysis of historical films and the rest of the course is devoted to comparisons of the acted version of a play with a film version of the same text, and to the analysis of film versions of other plays. A professor in the Southwest uses film to present the technical aspects of drama, including themes, modernisms, anagnorisis, periteteia, *scene a faire,* etc. A professor from the Northwest writes: "Personally, I believe that eventually all instruction in drama will be based on moving picture presentation of the more important plays."

Summary and Interpretation

Summary. It has been found that motion pictures are being used by at least forty English professors: (1) to develop photo-play appreciation, (a) by offering special courses and (b) by using motion pictures in regular English classes: (2) to motivate students in writing compositions and in oral comunication and to do more extensive reading; (3) to enrich the background of students for the study of English literature; and (4) to vitalize instruction in drama and theatre history.

It has also been found that motion pictures are being used in a large variety of ways at various levels of college teaching. Some professors follow informal methods, such as that of recommending certain pictures to students; and others make formal uses of films in their classes, showing particular pictures one or several times. A number of professors offer special

(*Concluded on page* 438)

December, 1941

Values of Visual Aids in Reading

How visual aids help solve various problems in the teaching of reading in elementary grades.

LAWRENCE R. WINCHELL
Superintendent of Schools
Vineland, New Jersey

From "Ikpuk the Igloo Dweller," a Bell & Howell release on Eskimo l

VISUAL education represents the grouping of educational materials or devices and an organized department of instruction which is based not upon subject matter, but upon method of presentation. This method has as its essential feature the fact that it belongs to one of the senses. Such a situation is without parallel. Visual education in the broad sense is not new. Models, maps, diagrams, pictures have been used for generations.

Much should be done to acquaint the child with his environment. Life can become full and rich only as far as the environment is understood and appreciated. Since sensory experiences constitute the basis for the child's educational pattern, with visual experiences accounting for perhaps three-fourths of our sensory experiences, visual education or sensual aids contribute greatly to the ends of education.

By use of excursions and his own spontaneous exploration the child will learn a good deal, but excursions are too expensive and time-consuming to meet the need. Something can be accomplished by bringing objects into the classroom, but these possibilities are also limited. A more economical and rapid means must be used to give the child an acquaintance with his world.

For some unexplained reason it seems commonly to be assumed that the necessity of supplying substitute or vicarious concrete experiences is very chiefly present in the upper grades or above. It is important in the later grades, but our earliest and still most striking evidence on the poverty of the child's acquaintance with the physical world is drawn from studies of the child on entering school.

Perhaps visual aids are thought to be less important for younger children because the materials which have been most widely used have not been designed for younger children. The captions on motion pictures, for example, cannot be read by them. This does not indicate that they are not of value, and that other suitable aids for children cannot be prepared. It simply points to the technical problem which needs to be solved.

That appropriate forms of aid to teaching may in part make up for the unavoidable meagerness of the child's direct knowledge of his environment, has been repeatedly shown by careful scientific experiments. These experiments have shown that well-selected pictures, slides, stereographs, silent motion or talking pictures may add from 10 to 25% to scores on tests of subjects which have been studied. But still many questions remain to be answered concerning the contribution which may be made by visual aids to education in order to establish beyond a shadow of a doubt their great potential values. There is far more justification for visual aids than merely the enrichment they afford.

More pictures and better pictures interpret facts difficult for children to understand. Motion pictures provide greater reality and interest.

From the filmstrip "Jack and the Beanstalk," produced by Society for Visual Education.

The Keystone Flashmeter in use in the classroom.

Exhibits are utilized to advantage. Posters are made by the children. Models produce greater understanding. Museum materials are collected and mounted for immediate study and future reference. The abstract and difficult ideas and discussions of textbooks are enlivened and re-interpreted in many different ways.

Reading Defects

No one theory can be used to account for all causes of reading difficulty. Children have been taught to read by a variety of methods. Educators are becoming increasingly aware of the situation and are seeking preventive procedures. A large percentage of disabled readers and the chief causes of retardation in reading is due to poor teaching and equipment.

Failure to read correctly is noted by the opthalm-o-scope, a device for photographing the eye movements in diagnosing the pupil with reference to speed. One of the things noted is the failure to attack words from left to right. This movement, from right to left, during reading is referred to as a regressive movement. Poor readers make more regressive eye movments than do good readers. Some children reverse words and letters until 7½ yrs. of age. The implication is that reading should be postponed until the special orientation of letters and words have a significance for the learner. Even at this time he should be closely supervised to prevent this backward movement and confusion in the mind of the child.

Study of the Woodchuck, from a Keystone slide unit on Natural Science.

Initial instruction for some children lasts until 7 years of age, and others identified by means of a reading-readiness test as prospective non-readers should have the initial period of instruction further delayed. Another key factor in avoiding confusion in the visual perception of word and phrase forms is that of meaning. A child who can be caused to feel that there is a real need for reading to learn is probably much more mature than the average 6-year-old. A reading program based on reading for meaning will embrace a system of word recognition, where context clues are heavily emphasized. Hence, reading attitude is complementary with reading for meaning.

Aids in Detecting Poor Readers

1. Faulty eye movements are symptoms of a poor reader.
2. The character of the eye movements varies widely with the attitude of the reader and the type of reading material.
3. Immature reading habits may be detected by measuring eye movements.
4. For normal children eye movements improve progressively.
5. Poor readers evidence many fixation pauses of long duration and many regressive movements.
6. Eye movements of good spellers and good readers tend to be systematic.
7. No visual impression enters the consciousness during the periods between eye fixations.
8. Pacing eye movement increases reading efficiency.
9. Increasing distance page is held from the eye causes increase in the number of fixation pauses per line.
10. Each child has a natural reading pace which for the same material is consistent from one page to another.
11. Irregular habits of perception, and brief and fluctuating attention usually result in the child being unable to read.

Learning to read, and reading efficiently throughout life depends primarily on the development of one's visual auditory powers. Recently, in the Vineland schools we have given prepared reading tests which have given us a key to the visual-auditory abilities that the child will need if he is to read easily and well. The tests measured perceptual abilities to discriminate among words, letters and forms; vocabulary; comprehension and recall of meaningful material presented orally; visual-auditory association of learning; knowledge of common, casual sequences and general information.

We have made a study of the Keystone Flashmeter and after several demonstrations by experts in the field, we have started to use it. In our remedial reading we feel that if we can find some specific lack and drill on it, we will improve reading. It is often our custom to take poor readers from the classroom and give them drill with a specialist, who is usually a non-teaching

(*Concluded on page* 426)

Between the Lines*

A detailed description of a school-produced film and educational values derived from the project.

WILLIAM S. WAGNER
Principal, Maumee, Ohio, Elementary Schools

THE production of this film provided our pupils with experiences which seem to have deep educational significance. Both as a motivating and an integrating force, the making of the motion picture stimulated the pupils in a cooperative effort toward attainment of a common goal.

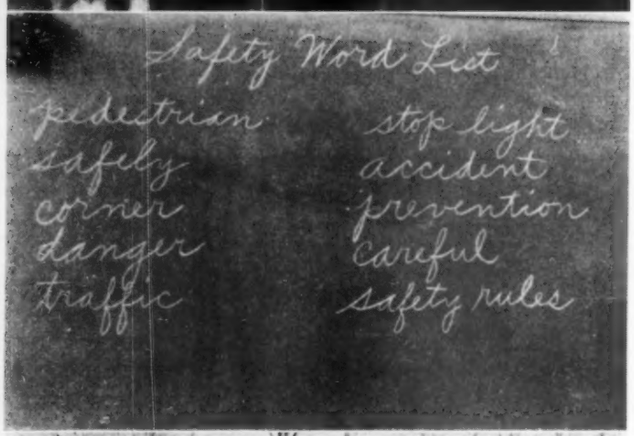
The pupils were initiated into the project by being told that a serious safety problem existed and that they had been chosen to help solve it by producing a motion picture. The problem was then explained to them: namely, that pupils were crossing the street in the middle of the block and not at the corners.

As a result of many discussions the pupils decided that the film should be so made that other pupils as a result of seeing the picture might be more careful when crossing the street. The scenario or shooting script which appears below tells its own story.

SCENARIO

Scene	*Action*	*Camera*
1.	Mother stops car across street from School.	1. Fade into L. S. (from opposite side of street). Children coming out of school. 2. L.S. (from roof). Traffic and children crossing. 3. M.S. Mother driving up. 4. M.S. Mother drives up and stops. 5. M.S. X coming out of school.
	Mother attempts by motioning with hands to signal child to cross at corner. Child is saying goodbye to friend and does not see her mother's signals. Child darts across street into path of oncoming car.	6. M.L.S. (from school door) Back of X and Mother in car. 7. C.U. X at curb. Says goodbye to friend crosses street—from curb. 8. M.S. Mother motioning child to corner. 9. Two angle shots M.S. of (a) girls saying goodbye and x starting across; (b) same thing—different angle car closer to x.
	Action does not show child being hit but shows mother covering face with hands and car wheels stopping, implying that child was hit.	10. C.U. Wheels as car comes to abrupt stop. 11. C.U. Driver's face. 12. C.U. Mother's face—fade out slowly.
2.	Title: "This is how it happened." Child who was hit is back in school (arm in sling). She is explaining to classmates how accident occured. Pupils take their seats and teacher asks "How could this have been prevented?" Several pupils make suggestions. Teacher writes these on blackboard. a. make posters. b. make and use safety demonstration table. c. write mayor to see if he will have lines painted at street corners around school. d. have parents stop on school side of street.	13. Fade into M.S. X in classroom arm in sling and tape on face. 14. L.S. X surrounded by group of pupils as X gestures showing how accident occurred. 15. Title "This is how it happened." 16. C.U. Teacher asks: (Title) "How could this have been prevented?" 17. L.S. from front. Pupils' hands go up. 18. Several C.U. of pupils as they make suggestions.
3.	Pupils make safety posters which teacher places around room.	19. M.S. Suggestions written on board as teacher (or pupil) turns toward group for suggestions. a. Make posters. b. Use safety table. c. Write our mayor about white lines at crossings. d. Have parents stop on school side of street. Fade out.
4.	Pupils construct safety demonstration table. White lines are drawn at street crossings.	20. Fade in C.U. Several students making posters advising crossing at crosswalks. 21. M.S. Pupils grouped around demonstration table.
5.	Pupils write letters to mayor asking him if it would be possible to paint lines at school street crossings. Letters are collected and folded and then put in one large envelope which is addressed to mayor. Letter is mailed.	22. C.U. One pupil marks white lines in proper place. 23. Pupils writing letters to mayor (use broad pens and black ink). (Show several sentences of interesting letters.) 24. C.U. Big envelope showing address of mayor. 25. M.S. Girl collecting letters from pupils. 26. C.U. Boy putting letters into envelope. 27. C.U. Writing Mayor's address on envelope. 28. M.S. Boy putting envelope into mailbox. Fade out.
6.	Mayor in his office receives envelope; opens it and letters fall out on his desk. He reads each one, smiling as he does so. Mayor rises, picks up envelope and hat and leaves his office.	29. Fade in C.U. of envelope on Mayor's desk. 30. M.S. Mayor picks up envelope and pulls out letters. 31. C.U. Mayor opens one of the letters. It can be identified as one of the letters in scene 23.
7.	Mayor enters classroom and confers with group of children at demonstration table. They point out where they think lines should be painted. He nods and leaves classroom.	32. M.S. Mayor rises, starts to leave room. 33. L.S. from front of classroom. Mayor enters. 34. M.S. Mayor with pupils at demonstration table. Pupils point to intersection and to youngster with arm in sling. 35. M.S. Mayor nods, starts to leave.
8.	Mayor is back in his office. Picks up telephone and makes call to maintenance department.	36. M.S. Mayor calls on telephone to the street maintenance department.
9.	Street Maintenance Department truck pulls up in front of school. Men jump out and take painting equipment from truck and begin painting lines at school crossing. Men complete job of painting.	37. L.S. Street Maintenance Department truck pulls up to crossing at school. 38. M.S. Men begin marking lines at crossing. 39. C.U. Painting begins. 40. M.S. Men complete painting job. 41. Street crossing with lines.

*A street safety film produced by Mrs. Mable Doenges' third and fourth grades of the Montpelier, Ohio, Elementary School with the cooperation of the Bureau of Educational Research, Ohio State University and the Highway Education Board. Mr. Wagner was formerly Superintendent of Montpelier Schools.



Scenes from school-made safety film.

Any school wishing to use the film, *Between the Lines*, should direct inquiries to Dr. Edgar Dale, Ohio State University, Columbus, Ohio. The Highway Education Board, Washington, D. C., also are distributing five copies nationally.

10. Mother drives up. Child who was hit comes out of school with other puipls. She continues to corner. Stops—looks both ways—then crosses between the lines.
42. L.S. (from front of school) X's mother pulls up in car on opposite side of street from school.
43. M.S. X coming out of school.
44. M.S. Legs and feet of children crossing between lines.
45. M.S. from in front of X as she walks across street between lines. Only legs and feet are shown.
46. Title
    Before Crossing
    Look Both Ways
    Then
47. Cross
    Between the Lines.

Length of film 300 ft. 16mm. Silent.

Looking back on the project the following results can be attributed to it, either directly or indirectly.

First: The cooperative effort put forth by the pupils is by far the most important result of the project. The pupils had much practice in working together effectively toward accomplishing a worthwhile goal.

Second: The value of the film itself is not easily measured. It has been shown and discussed in the Montpelier school with favorable results. There has been a definite improvement in the traffic problem outlined in the script since the showing of the film. Its value to schools in general will be determined in the near future when it will be available for showing.

Third: The pupils' contact with the mayor demonstrated to them that one of the functions of public officials is to serve the community. The pupils actually experienced a lesson on government which no amount of reading could have given them.

Fourth: The public relations value of the film is another factor not easily measured. It seems safe to say that the public in our community has a better understanding of school activities as a result of having seen the film.

Fifth: A much greater interest on the part of the pupils was shown toward the traditional subject matter.

A. English activities.
   1. In writing their letters to the mayor the pupils needed to know sentence structure, punctuation, spelling, and letter form.
   2. The pupils added to their vocabularies by adding such words as casualty, traffic, caution, pedestrian, zone, etc.
   3. The pupils needed to read in order to assemble facts relating to safety.

B. Numbers.
   1. In constructing the safety demonstration table it was necessary for the pupils to be familiar with the number processes involved.

C. Drawing.
   1. In the making of the safety posters the pupils needed to know how to print and how to arrange the printed words to the best advantage.

Sixth: The pupils of the third and fourth grades of the Montpelier school have learned safety facts and acquired safety habits which they should retain for life.

Education Through Socially Useful Work

Potentialities of the "school journey" as a valuable service to the community as well as to the school.

WILLIAM W. WATTENBERG
Chairman, Committee on Field Experiences
Chicago Teachers College

THE terms "educational field experiences" and "field trips" are usually considered completely synonymous. In most cases the only educational work conducted under school auspices outside the school walls is guided field trips; yet within recent years there has been a conscious effort in some institutions to give pupils and students an opportunity to have other types of field experiences under the guidance of the school. For example, some school systems have conducted surveys of their communities, the bulk of the interviewing and fact-finding being done by young people. In other cases, community-wide clean-up campaigns have enlisted the energy of school children, and the schools have made use of the opportunity for educational purposes.

At first blush many of these innovations have seemed rather daring. There has been a feeling, in many cases, that children are not capable of bearing the responsibilities which such projects entail. Even the appearance of *Youth Serves the Community*, by Paul Hanna, citing numerous instances of socially useful projects by youth has failed to be convincing to many school people, yet a little thought will bring to memory the fact that in societies less complex than our own the principal means of education has been that of gradually inducting the young into the responsibility of adults by means of having them do socially useful work on a gradually increasing level. Almost from the time they can walk they are helping the older men and women, and by giving such help are acquiring the experiences and understandings which will fit them to do adult work. Until mass production methods reduced the importance of artisans, many young people received their vocational education through the apprenticeship system in which again they learned by doing work which was socially useful.

Because the activities of children in such systems are valued by the adults, the children early receive the satisfaction of doing something which everyone regards as worthwhile for its products. In contrast with this the incentives for most school work seem highly artificial. The products of classroom activities are seldom valued in and of themselves by adults.

The attempt to provide educational experiences involving socially useful work has taken many forms. The most striking experiments in recent years have been associated with the programs of the Civilian Conservation Corps and the National Youth Administration. In these programs areas have been reforested, erosion control projects built, recreation activities fostered, and, in the work experience centers, products needed by public institutions have been built. The young people served by these organizations have learned much and while doing so have had the intense satisfaction of knowing that they were doing something which was important. The success of such programs has led to widespread support for the idea of establishing work camps for young people.

However, there is no reason why education through socially useful work must be relegated to non-school agencies in such special situations as a camp provides. As already indicated, some schools have made progress in this direction. And this may well be merely a beginning.

Because of the defense emergency, in many communities there will be tasks which badly need doing, which school children will be able to do without displacing gainfully employed adults. By being alert to such opportunities the schools will not only be rendering a great service to our country in the present crisis, but will also be providing for children an opportunity to develop desirable behavior patterns by engaging in socially useful tasks.

How such a program may come into being may be illustrated by recent developments in the community studies course at the Chicago Teachers College. This course had always relied heavily upon visual aids of various sorts to give the students a first-hand understanding of community problems in Chicago. Not only had moving pictures and slides been used, but guided field trips acquainted the students with conditions in various neighborhoods, particularly in blighted areas of the city. In order to gain additional first-hand experience, in former years students performed a comparatively small amount of observation and participation in the work of settlement houses, boys clubs, and other social agencies. The students enjoyed this very much and the experience they had with children helped them to develop rich insights into the problems of children in such neighborhoods. Because of this the faculty felt that an enlargement of this part of the program would be valuable.

This year the opportunity to do so presented itself. Many of the social agencies in the city had been depending upon W.P.A. workers as recreation leaders. Many of these workers have obtained employment in defense projects of various sorts. Those who are left on the project are, in a large number of cases, more sorely needed to staff recreational facilities for soldiers, as part of the morale aspect of the defense program. This withdrawal of personnel threatened many social agencies with the necessity of drastically curtailing their programs which, in turn, have been relied upon by many neighborhoods for the prevention of delinquency and for the maintenance of well-rounded leisure. If the students of the College could offer their services and fill the social vacuum created by this shifting in the recreational personnel, they would, in effect, be manning the second line of home defense, the morale build-

ing agencies serving civilian personnel. In addition, while they were rendering this service they would be learning a great deal about the techniques of group leadership and about the problems of families in various parts of the city. The opportunity was too good to miss. Accordingly, together with the Council of Social Agencies and the W.P.A. recreation training program, the community studies staff of the College inaugurated a special social work training program for the students, and set up machinery for placing them in social agencies where they were most needed.

Approximately 400 of these students are now leading groups in settlement houses, boys clubs, neighborhood clubs, Y.M.C. A.'s, and school recreation centers. In these agencies they are no longer regarded as mere observers who might occasionally be useful, but rather they are acting as valued assistants whose appearance on the scene is awaited eagerly. The students are experiencing the satisfaction of knowing that they are doing work which is highly valued for itself by the older adult community. They are feeling the responsibility of having groups of people dependent upon them for assistance. They are finding that these responsibilities call for knowledge and understandings which previously they had undervalued. As a consequence, they have gained new and powerful incentives for securing information about their city and about social institutions. The faculty provides supervision of these experiences, tries to help the students master the problems which they are confronting, and discussions in class sessions help the students to draw educational lessons from what is occurring to them. The community studies program has gained an added vitality and in class sessions students show a new eagerness to learn.

This is but one example of what must be occurring in many places throughout the country. As the defense program develops it is probable that many other such opportunities for doing socially useful work may appear. Some of this work will be suitable for students on the college level; much of it can be done by high school students; and some even by children in the upper elementary grades. Where the work can be done under the guidance of schools, the experience may prove enriching to the work of the school and to the lives of the children. If the schools are alert to these opportunities they may not only render important service in a time of crisis, but also provide for the children an opportunity to do socially useful work in a way which will add to their capability and personality development as can no other type of education.

Values of Visual Aids in Reading

(Concluded from page 422)

principal, in a small clinic group. In my experience the majority of poor readers are poor because they lack many or all of the fundamental visual-auditory abilities basic to good reading. They do require clinic help, but, most of all they need a program of enriched living with specific training in the development of the fundamental sensory abilities.

The Use of Visual Aids in Reading

Of all the physical factors we recognize vision and hearing—

Reading means visual stimuli being received and interpreted. It is only lately that school authorities have been adequately trained and equipped to determine visual readiness for reading. Since reading is based on sensory experiences the child who has had a greater number of these experiences will be the better reader. Some of these experiences may be first hand or real, others may be vicarious. For the sake of convenience, we will classify them under the following headings:

1. *Real*—a) excursions, b) construction, c) social experiences, d) practical experiences.

2. *Vicarious*—a) stories, b) pictures, charts, c) discussing experiences, d) motion pictures and slides.

Experiences when read by the child will make the material more meaningful. It may be said that experiences are of importance to a particular group of children if they extend and enrich knowledge, or change habits for the better. Vicarious experiences gained from pictures should be used in broadening meaningful concepts. But only the vicarious experiences which satisfy the criteria already set up for real experiences and which definitely aid in preparing children for later reading experiences, should be considered.

A fine example of vicarious experiences is found in the use of pictures to teach beginning reading. Visual appeals by presenting objects, models, charts, photographs, stereoscopes, lantern slides, and motion pictures furnish the pupil with impressions for which language is simply a symbol. Without the first hand experiences words are meaningless.

Real Aids

Excursions provide a means of enriching the experiences of pupils out of which school activities become more meaningful. Trips are a means of bringing the outside world into the schoolroom. Through this contact, reading and other subjects of the elementary school curriculum take on life and become more meaningful to children.

a. Types of Excursions—1. civic buildings, 2. industries, 3. museums, 4. library, 5. beach.

b. Activities—1. acquarium (outdoor)—charts and stories made by children, 2. school library—books borrowed from large library and exchanged weekly. 3. vegetable and flower garden—charts and stories telling what is being done. 4. museum—specimens brought in by children.

Vicarious Aids

A. Slide—The elementary pupil-made lantern slide holds a very real position in the field of teaching aids. He is not merely exposed to an experience—he is part of it. The whole experience is calculated to make a lasting impression on the child, and is thus an aid to reading readiness.

B. Motion pictures—Many students experience difficulty in school because of the lack of adequate cultural background as a basis of experiences to understand the school activities. There are many who have little or no experience with reading or travel. Here the motion picture is of service.

MOTION PICTURES—NOT FOR THEATRES

Installment 32. — More about the public and semi-public institutions that in more recent years have produced their own highly specialized motion pictures.

By **ARTHUR EDWIN KROWS**

RESPONDING to the impulse of the time was also the Young Women's Christian Association. The outstanding early effort there was the three-reeler "The High Road," directed by Carlyle Ellis. He made for the same client the useful three-reeler on proper shoes called "Foot Folly." Then the Boy Scout Foundation in New York was represented with several reels on its especial interest, partly with the idea of impressing its own members with its ideals, but probably more to enlist the interest of needed benefactors. The drive for funds with which to support these admirable private arms of social service, was necessarily constant, so, naturally, an instrument as effective as the motion picture in demonstrating what is being done with money in hand, was speedily developed with that object prominently in mind. Such was the aim of films made by the Modern Woodmen of America through the production facilities of the Ray-Bell organization; such was the intent of the films actively distributed during these years by the Order of Free Masons from the Masonic Temple Building in New York.

The officer in charge of this last-named work, begun about 1921, was the Executive Secretary of the Bureau of Social and Educational Service of the Grand Lodge of New York, known less pompously to his friends and associates as Sidney Morse. He was really an exceptional person. In the forty-seven years which had elapsed since his birth at Ledyard, Connecticut, he had had a varied experience in many widely separated localities. He had attended Massachusetts Agricultural College and Amherst; he had been connected with a publishing house at Richmond, Virginia; from 1900 to 1903 he had been associate director of the Home Correspondence Schools at Springfield, Massachusetts; 1904-1908 he had been editor and manager of the book department of *Success Magazine*, following which he had became managing editor of *Craftsman* and educational director of People's University at St. Louis. In 1918 he had been sent to France as a liason officer coordinating records of the Y. M. C. A. and the A. E. F.—all this before taking his place at the Grand Lodge in 1921. After 1929 Sidney Morse became vice-president and general manager of the Educational Publishing Corporation, Darien, Connecticut, which issues *The Grade Teacher* and *St. Nicholas* magazines. He died January, 1939.

Most of his films were of visits to Masonic institutions, of parades and other typical Masonic events. Lacking funds for more ambitious productions, he was unable to realize his dream of a really adequate program. He used to watch with great interest, however, the many motion picture activities of other tenants in the building, hoping, no doubt, to find in what they were doing, some suggestion for betterment of his own list. We all knew Sidney Morse, respected and liked him and welcomed him at our councils. One day, out of a situation involving J. E. Holley, Fred Wythe and F. J. Romell, who was on from Cincinnati representing Albert Krippendorf, he hit upon a plan to produce a real Masonic film with ritual significance. From somewhere—I suppose that it was specifically out of the luggage brought back by Dr. Holley from Palestine—

Dr. Grace Fisher Ramsey built one of the most efficient systems of non-theatrical distribution known to the field of popular education.

came five or six reels showing a reconstruction of the Temple of Solomon. They comprised photographs, made from various angles and distances, of Dr. Schick's celebrated model on exhibition in Jerusalem. It was believed by the schemers that this material might become the basis for a specialized entertainment for which the various lodges would be eager and happy to pay.

The general structure and proposed treatment developed rapidly in the fertile mind of Wythe, who planned to interweave various symbolical scenes with the shots of the model. I was assigned to supervise such production as might be necessary, and to cut, title and edit the whole. I was not a member of the order, but I knew enough about the subject to realize that every alleged detail in the design of the Temple of Solomon has a mystic meaning for this brotherhood. Merely to tell the story of the structure to any earnest Mason is to give him an inspiring message charged with meaning. Impressed with the possibilities, I read up on batches of literature sanctioned for the eyes of the uninitiated, and tried to interpret in picture forms the symbolical ideas cautiously conveyed to me by high officers of the order.

In accordance with the general intention to make a very little money go as far as possible, and taking advantage of the mystical indefiniteness of the subject to hide our poverty in deep impressive shadows, we photographed a sand-covered board on the roof of the Masonic Temple Building to illustrate the ancient desert trade routes, and I built, with scissors, paste and cardboard, a miniature set of imposing doors which slowly opened to reveal the Holy of Holies. This consisted of the letter "G," back of which we gradually moved forward a naked electric bulb, and so presently glared out the "G" and dazzled the spectator with the idea of eternal light.

In an interval, Larry Fowler, the cameraman, took three or four volunteers up to Fort Schuyler, draped them in bedsheets and crepe hair, and marched them up and down the huge granite stones of the buttresses to represent workmen doing their daily stint on the temple. It was an old idea. These same blocks had served long before as the walls of Jerusalem for an early theatrical "Star of Bethlehem." Somewhere, too, we photographed a cardboard obelisk in a strong light to show how ancients told the time, and I made a series of white sketches of signs of the zodiac on a black ground to be turned past the tip of a pyramid in illustrating the presumed method of the Egyptian high priest when he measured the limits of the year. Redistributed dresses and whiskers enabled us to show "three travelers on the shore"; a mound built at the foot of a small tree indicated the grave of the architect, Hiram Abif; and what I took to be his death was envisioned by some stock shots showing a tall tree in the forest struck by lightning. Results were duly cut into the assembled excerpts of the Schick reels, and there was a generous interlarding of long, solemn titles, expressed in what we now profanely call "four-dollar words."

Looking backward, I suspect that there may have been plenty of sheer hokum about this shoestring production, but high officials approved the film enthusiastically, slapping one another on the back in great delight over references which were "all Greek" to me; and I understand that the later exhibitions actually made some money for the backers.

In the propaganda groups one does

not readily include public museums, but such institutions these days, enjoying tax and tariff exemptions because of their avowed usefulness to mankind, and needing added funds for many purposes, feel obliged to publicize their services. But publicity is only a minor aspect of films as used by the Metropolitan Museum of Art in New York City. There motion pictures become an extension of the institution itself, carrying photographs of its treasures to places throughout the nation where eager students cannot otherwise enjoy the benefits. In all events, that is the theory.

It was about 1924 when this activity of the Metropolitan became pronounced. Conspicuous among the names of those responsible for the development was that of George Dupont Pratt, a trustee. It will be remembered that, when Allen Eaton, of the Russell Sage Foundation, was promoting his enterprise called the Pioneers of America, the burden of support came from George D. Pratt. I have wondered if that experience did not in some measure induce Pratt to this later activity. The idea gains color from the fact that Eaton was in close touch with the Museum work from its inception. On the other hand, George Pratt himself had been an ardent amateur motion picture cameraman for a number of years, especially in photographing wild life. For several years he was in charge of game conservation in New York State.

The 1924 Museum plan was to dramatize objects in the art collection so as to compensate for their inanimateness and to stimulate appreciation of their associated cultural ideas. To produce a few preliminary subjects of this sort experimentally, the Museum authorities engaged the very competent and worthy Major Herbert M. Dawley. What he produced for them included "The Gorgon's Head," in three reels, a version of the story in Hawthorne's *Twice-Told Tales*, and "The Spectre," described as "a New England legend." There were also the more frankly expositional films, "A Visit to the Armor Galleries," in two reels, and "Firearms of Our Forefathers," in one. The program was swelled by the addition of Eaton's "The Making of a Bronze Statue," "Vansantasena," a two-reel adaptation of an episode in the earliest extant Indian drama, "The Toy Cart," prepared and produced by the School of Fine Arts of Pratt Institute in Brooklyn, and four reels emanating, no doubt, from the Museum's archaeological stations abroad, called "Egyptian Monuments and Native Life." "The Etcher's Art," which appeared among the available subjects later, was produced by the Museum of Art in Boston, with Frank W. Benson providing the principal illustrations.

If the Metropolitan Museum had its problems in sequestering funds for its own films, another great popular educational resort westward across Central Park, the American Museum of Natural History, seemed to enjoy a happier situation which made its supply of motion pictures virtually inexhaustible, even ig-

Drawn by Wm. Oberhardt

Without meaning to do it, Theodore Roosevelt showed how museums might obtain educational films by cooperating with the big game expeditions.

noring the use of its own monies in the cause, and even if exhibition rights were generally tied up with fussy restrictions. It had been discovered long years before that big game hunters could give their adventures an air of public service, without foregoing self-indulgence, by placing their sporting expeditions—and these usually included the pictures—under the auspices of such an establishment. Of course, the educational values are important only when they are realized, and this phase, so far as the Museum of Natural History is concerned, owed much to the powerful, proper interest of the late Dr. George H. Sherwood, director of the institution from 1924 to 1934. He resigned his higher post at the end of that time (being succeeded as director of the Museum by Roy Chapman Andrews) to give his full attention to the Educational Department, of which he had been chief curator since 1906. He was privileged to work at this shorter range for less than three years, for he died in March, 1937.

Nevertheless, Dr. Sherwood builded wisely and well. Despite his passing, his work goes on in the splendid Museum Department of Education, which has long reached beneficiaries throughout the nation. But this is not just a motion picture project. Its services include also lectures, circulating collections and outdoor education—field trips, and special instructional opportunities at the Bear Mountain reservation. The activity in general is said to have grown largely out of the custom of a Museum lecturer, Dr. Berkmire, back in 1880, who invited his audiences to examine actual specimens at the close of his talks—although it is in the nature of the case that a Museum should reach people directly. It was in 1903 that Dr. Sherwood started the Museum's touring collections. In 1922 the free service to New York Schools was instituted and, about 1930, the wider circulation to the country at large was begun. It is currently estimated that through these channels the Museum Department of Education makes about thirty million contacts with individuals annually. The Department curator at present is Dr. C. Russell. The Museum began using films in its lectures to school children in 1911.

It is the motion picture work which is our present concern, and here the notable figure is Dr. Grace Fisher Ramsey, associate curator, who has done so much to organize and conduct the efficient Museum motion picture distribution. Dr. Sherwood had plenty to do most of the time of his directorship in setting up and maintaining policies, and of necessity the development of details was in the hands of assistants. Mrs. Ramsey, who was a very dependable assistant, attributes such success as she has had to her early training as a teacher, for through that she has known and appreciated the school requirements and the educational aims outside the school. When the First World War began she was teaching science in a high school at Chautauqua, New York. Caught in the patriotic fervor of that stirring time, she joined the War Canteen. Returning in due course, she was engaged by the Museum in 1919 to take charge of lantern slides. A part of her duties was "sight conservation," working in the Museum's celebrated training of the blind, in which connection she lectured frequently in the large auditorium, sometimes to audiences of approximately 1,500 persons.

The usefulness of motion pictures for Museum extension work became more and more evident to her, although it was clear, also, that for a comprehensive program the films at first in hand were insufficient. This conclusion came in the period when the Bureau of Education of the U. S. Department of the Interior was dividing its collection of motion pictures among the thirty-five volunteer distributors over the country. Several museums were in that list. Mrs. Ramsey became impressed especially with opportunities to circulate the reels of the Bureau of Mines. Accordingly that possibility was realized. In 1926 she visited Canada, where she found more valuable material in the library of the Canadian Government Motion Picture Bureau. The Museum of Natural History was therefore commissioned to distribute those films in the same manner.

Through the Museum Department of Education today, of course, there are many other subjects to be obtained. The stock is classified as: Athletics, Biology, Chemistry, Economic Geography, Domestic Science, Physics, Physiography, General Science, Health and Hygiene, Music, Nature Study and Elementary Science, and Social Studies. Borrowers pay for transportation both ways, plus a fixed charge per day of fifty cents for each silent reel, and a dollar-fifty for each in sound. Responsible educational institutions are offered an especial rate of twenty-five sound films for twenty-five dollars, if ordered at one time.

Discovery of the opportunities and advantages in expedition sponsorship probably belonged more particularly to the

Smithsonian Institution, of Washington, D. C., which arranged the celebrated African expedition of ex-President Theodore Roosevelt in 1909, although motion pictures did not figure in its original agreement. When the doughty T. R. left for Africa, he resisted all offers of motion picture cameramen to accompany him because of the earlier still-picture contracts; but Cherry Kearton, a London newspaperman, took a chance and followed the expedition with a filming outfit. Teddy could not resist a go-getter having this aggressiveness, and welcomed him in camp. Kearton then cranked numerous scenes which were brought to the United States and sold to the Motion Picture Patents Company. They were edited in the Kalem laboratories to two reels—the "program picture" length of that day—and released, beginning April 18, 1910, through General Film. European distribution was arranged by Kearton, himself.

However, the officials of the Smithsonian Institution quickly learned the value of films, as records if not as vehicles for furtherance of the educational force, and in later years they acquired many valuable subjects. Most of those are not nearly well enough known, probably because funds are not always available for circulation and because some owners make complicated reservations as to their use. Of course, there is expense attached to picture distribution, just as there is to the exhibition of fine museum specimens that are frequently stored away in the basement pending the release of funds.

I have happened to see Smithsonian film properties from time to time in private projection rooms while the material was being edited. For example, I recall with pleasure seeing the extended footage brought from Dutch New Guinea about 1926 by Matthew W. Stirling, the scientist who is now the Institution's chief of the Bureau of American Ethnology. That fascinating study of primitive pigmies was made with the backing of the Smithsonian and the cöoperation of the Netherlands Government. I had the additional privilege of hearing Dr. Stirling talk informally about his trip as the then unedited passing pictures recalled various incidents to his mind.

One supposes that expeditions of this sort, with their scientific specialists, chartered ships, airplanes, automobiles and companies of hundreds of native porters and guides, must cost huge sums to the moving spirits, but it is astonishing to learn at how low a figure many of these adventures may be financed, provided that the persons to be backed are qualified explorers. Contracts for theatrical release of motion pictures taken, rights to first-hand narratives sold to newpaper syndicates, elaborate aids from governments anxious to attract tourists to their off-the-beaten-path possessions, advertising testimonials of various sorts—all these bring the out-of-pocket costs rapidly down. Just lately a friend was telling me that his recent sojourn in the heart of Africa, lasting two full years and resulting in many valuable reels of undetermined earning power, cost him only about $3,000. The rest of the expense was compensated for through some forty-five contracts for incidental services of the kind mentioned.

Of course, the great museums have a dignity to maintain, so they are obliged to forgo some opportunities like these and to pay the larger bills directly. It would be absurd thus to minimize the costs of the Gobi Desert expeditions of Roy Andrews, lately the director of the American Museum of Natural History, although there is no doubt that sale of profitable log-rolling rights somewhat lightened the financial burden. Andrews, to be sure, brought back an amply supply of films photographed on his later trips. His best known cameraman was James B. Shackelford. He shot the Gobi Desert series.

January 13, 1924, the American Museum of Natural History announced that it had made an agreement with the Martin Johnson African Expedition Corporation to show all the films made by the Johnsons during twenty-six years of world travel. Looking at the record, one finds that F. Trubee Davison, president of the Museum, is vice-president of the corporation, and James L. Clark, vice-director of the Museum, is secretary. Clark, it may be mentioned, in addition to being lecturer, explorer, big game hunter, taxidermist and animal sculpter, described himself as a motion picture engineer. In the last named respect he was long a moving factor in the Akeley Camera Company.

Today the motion picture cameraman is an indispensable member of every scientific expedition, and one may understand how a large institution of this sort may quickly build up an imposing film library by glancing with me at a convenient newspaper clipping from the New York *Times* of November 20, 1934. Therein are named the chief parties currently in the field for the American Museum of Natural History. F. Trubee Davison, president, speaks of the discoveries and researches of Dr. Barnum Brown in Wyoming; the Scarritt-Simpson Patagonian expedition; the Whitney South Seas expedition; the Bolivian sojourn of Dr. Wendell Bennett; Dr. Frank Lutz's studies in Colorado and Northern Arizona; the Van Campen Heilner and Archbold parties respectively in the Zapata Swamps in Cuba and in New Guinea; the Vernay-Hopwood-Chindwin expedition soon to leave for Burma, "and others." Arthur S. Vernay, whose name has appeared in connection with many interesting expeditions, is a trustee of the American Museum of Natural History; so is W. Douglas Burden, who produced the remarkable "Silent Enemy," a film acted by the Ojibway Indians in their own Hudson's Bay country.

The distinguished arctic explorer, Donald MacMillan, headed various expeditions for the Field Museum of Chicago. The Oriental Institute of the University of Chicago has made films at its several archaeological stations in Egypt, Iran and elsewhere on sites of ancient civilizations, principally under the supervision of Charles Breasted, son of the late James H. One needs but to follow through the records of important scientific institutions to uncover the details. I do not attempt it here because, so far as this narrative is concerned, the essential facts are already made sufficiently clear.

The Busy Government

THE apotheosis of the "customer" story is in the case of the United States Government. The reader has been acquainted in earlier pages with some of Uncle Sam's first steps to use films, but the great efflorescence here, as in other places, was after the First World War.

A summary of the film activities of the Gvernment in 1920 was given in July of that year by Fred W. Perkins, assistant in charge of motion pictures in the Division of Publications of the U. S. Department of Agriculture, before the National Academy of Visual Instruction in session at Madison, Wisconsin. Mr. Perkins's report covered a variety of such undertakings being carried on by the Signal Corps and the Army Recruiting Division and the Marine Corps of the Navy Department; the Bureau of Education, the Reclamation Service, the National Board of Parks Service and the Bureau of Mines of the Department of the Interior; the Public Health Service, the War Risk Insurance Bureau of the Treasury Department; the Bureau of Standards of the Department of Commerce, and the Department of Agriculture, where the motion picture work of seventeen bureaus was united under a single head.

Motion picture work of the Government, resembling in this respect its elaborate and long established activity in still photography, was not by any means then, any more than it is now, exclusively for public information. Results were intended frequently just for the fuller guidance of Government scientists and engineers who were employed on large projects, or for the training of operatives in various specialized lines of service. And, as the nation's circumstances changed, so did the Government's picture requirements expand and contract. In time of war the film supplies of Army and Navy grew out of all ordinary proportions; in time of peace the especial interests of the Administration in power likewise reflected the character and the scope of related official departments.

The Department of Agriculture received the first healthful encouragement in the Government motion picture plan doubtless because the people of the United States of America were then traditionally and preëminently an agricultural nation. At the same time it is to be remarked that the motion picture divisions of most foreign governments also are strongest in films designed to educate their people in tilling the soil and in animal husbandry.

(To be continued)

Among Ourselves

Notes from and by the Department of Visual Instruction of the National Education Association.

Conducted by JAMES D. FINN
Colorado State College of Education, Greeley

■ The New England Branch of the Division of Visual Education of the N. E. A. convened in a special meeting at the University of Maine Saturday morning, November 15th. Leading speakers were Professor Abraham Krasker, Boston University, who discussed "Recent Tends in Visual Education"; James Brewster, head of the Harvard Film Service, Harvard University, whose topic was "Educational Recordings"; Donald W. Smith, University of New Hampshire, who conducted "A Question Box on Audio-Visual Aids;" and Harold W. Louder, Maine Central Institute, who demonstrated "Classroom Methods in Teaching with Sound Films."

Dr. Abraham Krasker was a speaker on the New England Association of Teachers of English program, November 8th, at Springfield, Massachusetts, discussing the subject "Using Teaching Aids Effectively to Improve the Teaching of English."

■ Dr. Krasker reports that Boston University is now offering a program which affords an opportunity for students to major in Visual and Audio Education. The following courses are being given this semester: Visual Aids in Occupational and Vocational Guidance, The Use of Teaching Aids, Visual Aids in the Sciences, Methods of Teaching Science, Problems in Visual Education, Preparation and Projection of Teaching Aids. Courses planned for the second semester, beginning February 4, are: Visual Aids in Health and Physical Education, Visual Aids in the Social Studies, Visual Education-Management; and the last three included in the first semester's program. All the courses are conducted by Dr. Krasker.

The placement of graduates of the Department as directors of Departments of Teaching Aids in school systems warrants the establishment of a major.

■ Another news item to reach us from New England is the establishment of a film library at the University of Connecticut at Storrs, to serve the schools of that area. That institution also plans to offer courses in Visual Education.

■ Mr. Wilber Emmert presided at an Audio-Visual Education Conference held at State Teachers College, Indiana, Pennsylvania, Saturday morning, November 1, for member schools of the Indiana Film Library. "Effective Utilization of Instructional Sound Motion Pictures in the Classroom" was the theme of the session.

■ Miss Margaret V. Girdner is the director of the newly organized department of visual instruction for the San Francisco schools. She is cooperating with Boyd Rakestraw of Berkeley, and Gardner Hart of Oakland in planning the program of the winter meeting of the D.V.I. at San Francisco in Febraury, to be held in connection with that of the Association of School Administrators.

■ Dr. John E. Dugan, Principal of Haddon Heights Schools, New Jersey, has been appointed President of the Visual Education Section of the World Federation of Education Associations. Dr. Dugan is a member of the Committee on Motion Pictures of the Department of Secondary Education of the National Education Association and is the author of several motion picture study guides.

■ The Texas State Department of Education has set up a Division, with a director in charge, to supervise and develop visual education and radio and similar activities on a state-wide basis. Other states having directors of Audio-Visual Education are Ohio, New York, Montana, California, Louisiana, and Virginia.

■ Copies of the Proceedings of the Fifth Annual Southern Conference on Audio-Visual Education, which was held in Atlanta on November 13-15, 1941, are available for purchase at $1.00 each. Included in the Proceedings are the principal addresses given at the Conference, and complete stenographic transcripts of seven group forums which were conducted during the Conference by leading audio-visual educators.

Orders and remittances should be sent to the Southern Conference on Audio-Visual Education, 223 Walton Street, N. W., Atlanta, Georgia. Postage is free on all orders which are accompanied by remittances.

■ The publication, *News*, from the Bureau of Audio-Visual Aids, Indiana University, reports the following:

Carl A. Benz and C. M. Seddelmeyer have prepared a mimeographed announcement entitled "Information for Operators." The announcement points out clearly the responsibilities which must be assumed by students who expect to perform the projection duties of a school, and the procedures to be followed in handling showings. If you would like to know how Mr. Benz and Mr. Seddelmeyer are handling the situation in their school, contact them at the Hammond High School, Visual Aids Department, Hammond, Indiana.

The Literature in Visual Instruction

A Monthly Digest

Conducted by ETTA SCHNEIDER

ADMINISTRATION

The School Librarian and the Audio-Visual Program—Thelma Kidd, Bedford, Va.—*Virginia Journal of Education,* 35:59 Oct. 1941.

Specific suggestions for persons in Virginia who will be using the newly-created regional film library service. There is no denying that the school librarian, with the aid of the classroom teachers, is the logical person to arrange for ordering and keeping records of use and sources.

EVALUATION

Evaluation and Use of Sound Films—Howard A. Gray, Erpi—*Elementary School Journal,* 42:97-104 Oct. 1941.

The author, in his search for a valid means of evaluating educational films, sought the assistance of a graduate class of students in educational psychology at Teachers College, Columbia University. The group consisted of experienced and inexperienced teachers who had given little thought to the role of sound films in the curriculum. The author found that the reaction to Erpi's "Navajo Children" was as varied as the past experience of the observer. He concludes that the best means of evaluating a film's usefulness is with the aid of the potential consumer, the young pupil.

Teacher-Pupil Appraisals of 150 Science and Mathematics Films.—Lyle F. Stewart, Oak Park, Ill.—*School Science & Mathematics* 41:769-774 Nov. 1941.

A report based on a collection of evaluation sheets of films used at the Oak Park High School over three years. A copy of the evaluation form is provided in the article. It is explained that the present form is the result of several revisions.

Among the outcomes of the systematic program of evaluation, the author points out that: 1. Films whose titles are misleading or vague are clearly described to avoid disappointments; 2. The more use that is made of a given film by teachers in various departments, the wider variety in application; 3. The detailed reports are available as teaching aids, but a tabular chart of 150 films makes possible ready reference.

MAPS

Use of the Spot Map in Science Classes—O. A. Engstrom, La Crescenta, Calif.—*California Journal of Secondary Education* 16:364 Oct. 1941.

Large, simple maps are mounted on bulletin boards or on cardboard and with the aid of colored pins, information relating to weather, wild flowers, trees, earthquakes and many other studies is thereby vitalized.

EXHIBITS

Three-Dimension Pictures: the Portable Educational Diorama—C. E. McCafferty, Box Butte Co. Superintendent, Alliance, Neb.—*Nebraska Educational Journal,* 21:332 Nov. 1941.

Rural educators, in their modest, unsung way, are often responsible for introducing and effectively using vitalized teaching aids. Of course, this is the result of sheer necessity, since the children in rural areas have so little first-hand experience with the world at large. On the other hand, they have access to many of the "visual aids" which large-city schools must buy.

In this article, we learn about a very workable exhibit library that has grown as the result of one man's resourcefulness. From crates or simple wooden containers he has fashioned scenes of foreign life, American Indian life, and habitat groups of plants and animals. Workers on a WPA project have helped to increase the number of dioramas and today the teachers of Box Butte County have ready access to 73 subjects from which to choose. Each exhibit is accompanied by a teachers' guide and reading material for pupils of each educational level. This is a very helpful article, and one which should lead to similar projects in the most underprivileged community.

RADIO

Adapting the Radio to the Classroom—Allen Y. King, Cleveland—*Social Education,* 5:412 Oct. 1941

This is a progress report of the now-famous educational broadcasting program of the Cleveland Board of Education. The schools of that city have the good fortune to have exclusive use of an FM station. Three principal advantages are seen in maintaining a school station. First, radio broadcasts can be planned to fit school schedules. Second, there can be pauses to permit classroom activities. Third, programs do not have to appeal to the general public.

Programs seem to be most effective when not more than 15 minutes in length and heard only once a week. Broadcasts are prepared with the aid of a classroom teacher in each field. A teachers' manual is prepared for each program. Each script is tried out with children first. Radio technique varies. The exposition broadcast is desirable for some kinds of lessons; dramatization for others. Wherever possible the listeners carry on activities in the classroom. Sometimes outside experts are brought to the microphone.

Lantern slides, often especially made for the broadcast, are used in each listening room. These supplement the broadcast admirably where maps, diagrams or cartoons are needed.

The assistant superintendent in charge of radio for Cleveland, H. M. Buckley, has summarized the values as follows: 1) Radio is an important means of communication; 2) It may present auditory images more effectively for some persons than do printed symbols; 3) it improves some phases of school work; 4) it becomes an excellent medium for teacher education and an aid to supervision; 5) radio lessons, with silent intervals for activities, increase effectiveness; 6) radio programs of a local nature may be supplemented by national programs.

The persons engaged in educational broadcasting have noted that pupils are much interested in radio; that they want to continue to listen; that most teachers use radio, even though listening is optional; that there are requests for repetition of broadcasts; that pupils learn from the broadcasts; and that teachers are learning new techniques.

PHOTOGRAPHY

Featuring Photography—John B. MacHarg, Lawrence College, Appleton, Wis.—*Nation's Schools,* Nov. 1941 p. 43-45.

An appeal, (well-documented and most convincing) for the teaching of photography as an art form throughout the school.

Composite Stereography: A Technique for Producing Binocular Depth Perception without Paired Stereograms or Viewing Apparatus—J. P. Foley, Jr. et al—*Journal of Experimental Psychology,* 29: 256-261 Sept. 1941.

This article should be interesting to those who are looking forward to three-dimensional photography at low cost. It describes an experiment by the Douglas F. Winnek Laboratory, Mt. Vernon, N. Y., using an extension of the moving-picture camera technique for obtaining three-dimensional effects without use of viewer. The feature of this experiment is that it permits the study of depth and motion by means of a single composite stereograph.

PERIODICALS

Sight and Sound, Summer 1941. Vol. 10 No. 38. British Film Institute, 4 Great Russell St., London WC1.

It continues to amaze an American reader that so quiet and dignified a publication can come from a war-torn land. The British have a reputation for being matter-of-fact in the midst of tumult. The British Film Institute, true to this spirit, is still interested in such innocuous themes as reviewing mediocre American films, and reporting Canadian and Australian film production.

Two articles, however, stand out as important contributions for American educational film-makers. Basil Wright analyzes the service of the documentary film group in producing films for general education. His article, "Realist Review" comes as a welcome supplement to the British war films already being circulated here. He tells us that the documentary units serving many agencies, are busier than ever before.

"One or two facts, however, have already become clear," writes Mr. Wright. "The pre-war experiments in dramatic technique have proved of great value, not only in the . . . . longer productions, but also in the . . . five minute films . . . . Clearly the documentary approach, based on the observance of reality and on many years' experience of handling of ordinary people, is in a position to give an impression of actuality to the public; and, more importantly, to make the public feel that the subject dealt with is really a part of their own lives and responsibilities, and not a fictional episode divorced from their own experience."

The article by Aveling Ginever (p.35) is misnamed, "Principles of Technical Film Production", for it deals with the principles of making and using educational films. Among the principles are: 1. The film subject should be appropriate to the medium. If a subject can be taught without the aid of visual education, then a film is redundant. 2. A film should be simple, and should not be dogmatic. There should remain questions for discussion with the aid of the teacher. 3. A film can have great interest, even though it is educational. "There is drama even in a nut, There is no need to strain for effect—the drama is there waiting to spring into animated life on the screen." 4. Films should possess elements of humour. 5. Technical treatment should not get in the way of the story. 6. A film demonstration should plant the seed for further study; it should arouse curiosity and a desire for knowledge. 7. Above all, simplicity should be the keynote. But, this should be planned simplicity.

The threat to the future development (of educational films), concludes the author, is now from within. Poor craftsmanship, inefficient production, static technique endanger the normal evolution of the educational film toward its proper function in our national life—an influence as powerful as the printed word.

Visual Aids Issue: *American Biology Teacher,* Vol. 4 Nov. 1941.

The biology teachers of most urban schools are way past the era of "shall we or shall we not use visual aids?" They've been making and using them for many years. This issue of their magazine, therefore, plunges into specifics—For example, Mary D. Rogick tells how students can apply their art ability, plus their sense of humor, to create "Cartoons and Simple Sketches as Visual Aids." (p. 45-48). The important things to remember about science exhibits are summarized in "Science on Display" by Addison Lee. Other articles are equally suggestive of simple projects for an integrated high school curriculum.

BOOK REVIEW

How to Make Animated Cartoons—Nat Falk—Foundation Books, New York City, 1941. 79pp. $1.49.

There has been much publicity given recently to the great skill and elaborate planning needed to produce the charming animated cartoons of the Disney, Fleischer, Terry-Toons and other studios. Mr. Disney himself has exploited the field in no small degree, through his "Reluctant Dragon" in which Robert Benchley tours a cartoon studio to get a story filmed. At about the same time a traveling exhibit was displayed in museums around the nation, showing how animated cartoons are made. Mr. Falk's book is a valuable supplement to these demonstrations. It permits the enthusiast the luxury of browsing in private through the history of the industry, or to dabble in making creatures of his own imagination.

How to Make Animated Cartoons will meet the needs of a varied audience. For example, it presents documentary notes on the history of cartoon-making that has not previously been recorded in a single volume. In this respect it is similar to the article currently running in EDUCATIONAL SCREEN on "Motion Pictures—Not for Theatres." Drawings and interesting format help to make this history very readable.

Another chapter serves as a directory to would-be careerists, giving addresses and brief description of each of the important cartoon-producing studios. There are seven large studios: Disney, Fleischer, Terry-Toons, M-G-M, Walter Lantz, Leon Schlesinger and Screen Gems. Most movie-goers recognize these studios only by their products, so illustrative drawings are included to help us.

The chapters on "How Animated Cartoons Are Made" and on "Character Creation" are highly recommended to high school students and grown-ups who want a better understanding of this art form. Mr. Falk has an excellent manner with his pen. He uses simple sentences and non-technical language. He has sought cooperation from one of his fellow-artists to describe how certain characters were born. Walter Lantz tells how Andy Panda came to be. Andy grew out of a three-page spread in *Life Magazine* on a panda couple at the Chicago Zoo. Mr. Lantz went to Chicago, took movies of the team and studied their movements and antics until Andy Panda was created in pen and ink.

Children of any age, from 6 to 60, will enjoy the section on "How to Draw Animated Cartoons." Art teachers will especially want to use this section as intrinsic motivation for the habitual doodlers in the classroom. Instead of trying to draw a far-fetched caricature of the teacher, the doodler can learn to create Popeye, Pluto and many other favorites. They all start as two or three ovals, and with a few strokes, there you have a creature with any kind of expression or mood you desire. This book can hardly be classified as a part of the literature in "Visual Education," but it is part of our general education to be able to read it.

SOURCES OF INFORMATION

Some Audio-Visual Aids in Science—Jubert J. Davis, Matthew Whaley School, Williamsburg—*Virginia Journal of Education,* 35:54 Oct. 1941.

A good ready-reference, in tabular form, compiled by the author and a group of science teachers at the William and Mary workshop last summer.

Problems of American Democracy: Audio-Visual and Teaching Aids, 1941—compiled under the direction of John J. Rellahan, available from Dr. Lili Heimers, Director, Visual Aids Service, New Jersey State Teachers College, Upper Montclair, N. J. 29 pp. mimeo. 50 cents in coin.

This is the latest addition to the very helpful series of source lists prepared by this Service. It lists free or inexpensive illustrative material useful to classes in high school and junior college interested in discussing problems of American Democracy. The guide is divided into a General section, Political Problems, Economic Problems, and Social Problems. Under each section sources are indicated for charts, exhibits, films and filmslides, graphs, maps, pictures, posters, radio scripts, recordings, slides, and publications on the subject.

Films Made by Community Chests and Councils of Social Agencies—Community Chests and Councils, Inc. 155 East 44th St., New York City. March 1941. 15 pp. mimeo.

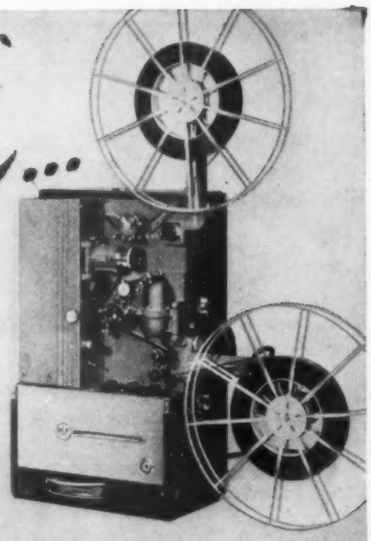
A directory of motion pictures and slide films on activities of Community Chests and welfare associations. Data given on each film includes name and address of producer, date of production, brief description of contents, whether or not it is available to members of CC and C, whether 16mm or 35mm, sound or silent, in color or black and white, and running time. The material is so arranged that users can quickly locate cities having slide films, films made in other than "agency tour" style, color films, 35mm films, silent films with narration or with scripts for sound recordings. Some fifty-odd cities are indicated as sources for films in this field.

Films Produced by National Social and Health Agencies—1941. 10 pp. mimeo.

Another compilation by Community Chests and Councils, Inc., listing films and slidefilms produced by national social and health agencies, on such topics as: social hygiene, cancer, birth control, hard of hearing, boys' clubs, scouting, probation, prevention of blindness, tuberculosis, family welfare, nursing, etc. Terms for securing the film, whether for sale, rent or loan are given in addition to other data.

On the "Broadways" of America...

RCA Motion Picture Sound Equipment "Stars" for over 6,000 Theatres



Get the same "star" performance for your pictures with RCA 16 mm. SOUND FILM PROJECTOR

• *For finer, clearer sound... more even light distribution on screen... greater operating simplicity—here's* your *projector!*

When the motion picture industry goes for something in a great big way—you *know* it's good. *It has to be!* And over 6,000 American theatres use RCA Equipment!

That's why we say—give *your* pictures the *professional* projection they deserve with the sensational RCA 16 mm. Sound Film Projector. Completely RCA engineered, it gives new life, new sparkle to every picture. It distributes light on the screen more evenly. It reproduces sound with tones full, clear, and natural—at *any* volume.

In addition, operation of the RCA 16 mm. Sound Film Projector is simplicity itself. All size reels are quickly rewound by motor—cleaning and adjusting are simple. Threading may be quickly and easily accomplished because threading line is cast right on the projection block.

For these reasons—and because of it's delightful portability—more and more schools are getting this projector each week. It's the ideal instrument for your school films!

•

← Radio City Music Hall in New York City

has RCA Motion Picture Sound Equipment. Over 6,000 theatres on the other Broadways of America are similarly equipped to provide their audiences with the finest performance.

16 SUPERIOR FEATURES—YET IT'S PRICED WITH THE LOWEST!

Trademark "RCA Victor" Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc. In Canada, RCA Victor Company, Ltd., Montreal.

FOR EXTRA QUALITY AT NO EXTRA COST Buy RCA VICTOR!

Modern schools *stay* modern with RCA Tubes in their sound equipment

RCA Victor

AUDIO VISUAL SERVICE FOR SCHOOLS—Educational Dept. • RCA Mfg. Co., Inc., Camden, N. J. • A Service of Radio Corporation of America

Educational Department (E-1)
RCA Mfg. Co., Inc., Camden, N. J.
Send complete information regarding RCA 16 mm. Sound Film Projector.

Name_____

School_____

Address_____

City_____ State_____

Motion Pictures . . .

that vitalize significant events in U. S. History and enrich the understanding and appreciation of our American Democracy.

16 mm Sound, each 2 reels long

Our Monroe Doctrine
Our Declaration of Independence
Our Bill of Rights
Our Louisiana Purchase
Our Annexation of Texas
Our Missouri Compromise
Our Ordinance of 1787
Territorial Possessions of the U. S.
Territorial Expansion of the U. S. from 1783 to 1853
Causes and Immediate Effects of the first World War

Reasonable Rental Rates . . . . Efficient Service

IDEAL PICTURES CORPORATION
28 East Eighth Street Chicago, Ill.
2402 W. Seventh Street Los Angeles, Calif.
18 South Third Street Memphis, Tenn.
Stevens-Ideal, 89 Cone St., N. W., Atlanta, Georgia
Bertram Willoughby Pictures Inc., 1600 Broadway, New York, N. Y.

RELIGIOUS MOTION PICTURES for *LENT* and *ADVENT*

Reels
9 DON BOSCO (St. John Bosco)
8 GLORY OF FAITH (Story of St. Theresa)
7 ST. ANTHONY
7 ST. FRANCIS
7 ST. BERNADETTE
6 JESUS OF NAZARETH
4 AMBASSADORS OF CHRIST
9 AN ORPHAN BOY OF VIENNA
8 CAVALCADE OF CIVILIZATION
9 MUTINY IN THE BIG HOUSE
1 CORONATION OF PIUS XII

VISUAL ART FILMS DISTRIBUTORS

Talkies and sound!
All for rental. Many for sale.
1303 Porterfield St.
Pittsburgh, Pa.

A New Film Plan — Noon Movies

16 mm features for both the Elementary and Senior High School.

Extremely reasonable rental rates. A very good school selection of Major features. Many new releases.

Write for information regarding our plan.

V. L. FRYAN
24000 Chardon Rd. Euclid, Ohio
(Serving the schools since 1930)

Experimental Research in Audio-Visual Education

By DAVID GOODMAN
New York University, New York City.

Title of Thesis: HIGH SCHOOL SCIENCE STUDENTS PREFERENCES OF ILLUSTRATIVE MATERIALS

Thesis completed 1940 for the degree of Doctor of Education, Colorado State College of Education, Greeley, Colorado.

Investigator: CARROL C. HALL

Need for Study

High school science textbooks contain many illustrations. These illustrations are of various types and are used in many different ways. In fact, it is difficult to conceive of the publication of a science textbook at the secondary level that does not contain illustrative materials.

Yet, in spite of their common use, very little is known about illustrations. It is assumed that they aid in the learning process. This assumption, however, has little support in terms of objective evidence. The effectiveness of illustrations as aids to the learning process is not known. It is an educational problem that needs careful study.

If the students prefer one type of illustration over another, a clue is furnished as to the type of illustration that would be potentially more effective in stimulating learning. The type of illustration must have in it an element of attraction that is not present in the other types.

Perhaps all types of illustrations are equally attractive. If so, then other qualities for effective illustrating must be sought. If not, the type of illustration that is most attractive should have greater learning value. Other questions are immediately raised as the study of this subject progresses. Which type of illustration is the most attractive to the younger students, to boys, to girls, and how are the preferences affected by the amount of science education or by the number of years spent in high school?

Answers to these questions should aid the classroom teacher or school administrator in the selection of high school science textbooks. Publishers and editors of secondary school science textbooks should also find this information to be of value in making their products more effective for classroom use.

Problem

What are the illustration preferences of high school science students?

Procedure

The study was conducted during the school year 1939-40 in Springfield High School, Springfield, Illinois. Members of the classes in general science, biology, and physical science indicated their preferences. Three hundred forty-five students (345) indicated a total of 20,700 preferences for the illustrations shown them.

A check through a number of the commonly used high school science textbooks showed that three basic types of illustrations are used. These are: the diagram, the cartoon, and the photograph. This does not imply that three methods of illustrations are the only types used. Other types are used in varying amounts. The three types chosen are most commonly used.

For the present study sixty (60) science illustrations were chosen. Two hundred illustrations (200) were originally selected from high school science textbooks that were in classroom use. The final illustrations for the study were selected by a process of examination and elimination. Every effort was made to reduce the factors of difference in attractiveness. Uniformity in the quality of the illustrations used was carefully judged. To insure further uniformity in the illustrations, only those showing some science fact, law, theory or basic principle were used. This eliminated the purely decorative type of illustration.

The illustrations chosen covered a wide range of science information and were confined to high school science. Twenty

illustrations of each of the three basic types were included in the final selection.

The illustrations chosen for the study were mounted on pieces of white cardboard 8x11 inches in size. The size of the cards was determined by the dimensions of the projecting machine by means of which the illustrations were shown to the students. The cards were numbered from one through sixty so that as each illustration was shown the number could be clearly seen. This was done to avoid confusing the student while he was recording his preferences.

There were two possible ways of collecting the student preferences. One was to pass cards among the students and have them make their choices as the cards came to them. The other method was to project the illustrations by means of the daylight projector. The latter method was chosen because of the large size of the class groups involved.

To facilitate the collection of the student preferences a special form was prepared. This form provided spaces in which the sixty decisions to be secured could be indicated. For each illustration shown provision was made for the choice of one of three decisions. The three choices were indicated by the letters a, b, and c. The use of the three-letter preference range appeared to be adequate in obtaining the degree or intensity of preferences.

In addition to the use of the blank just described, certain preliminary precautions and instructions were given the participating student to insure complete understanding and accuracy in the process of indicating the preferences.

The preference blanks were checked to determine (1) the number of times each letter (indicating intensity of preference) had been marked for each type of illustration and (2) the total number of preferences indicated.

The next step in tabulating the data consisted in the preparation of tables showing the influence of sex, chronological age, year in school, and semester of science education on the preferences for the types of illustrations.

Findings

1. The total group of high school science students preferred the types of illustrations in the following order: (1) the cartoon, (2) the diagram, and (3) the photograph.
2. The preferences when checked in terms of sex, revealed that the boys preferred the diagram and that the girls preferred the cartoon. The photograph was preferred with approximately the same intensity by both the boys and the girls.
3. The preferences for the cartoon and photograph were greatest by those students who had less than five (5) semesters of science education, who were in the first three years of high school and who were youngest in chronological age.
4. The preferences for the diagram were greatest by those students who had over (5) semesters of science education, who were in the last year of high school, and who were oldest in chronological age.

In the interpretation of the findings certain limitations should be recognized: (1) Preferences for certain of the illustrations may be influenced by aesthetic qualities, and (2) Individuals involved in the study were enrolled in one school in one community.

Conclusions

The findings of the study indicate the fact that there is a difference in the preferences for different types of illustrations by the older and younger high school science students. A science textbook published for twelfth grade boys should make liberal use of the diagram type of illustration. A textbook designed for boys or girls in the ninth or tenth grades of high school should use the cartoon more frequently than the diagram.

A textbook prepared for girls classes at any level of high school science or for use in a mixed class should use the cartoon type of illustration as much as the subject matter will permit.

The photograph as a type of science illustration for the high school science textbook should be used sparingly. The fact that this type of illustration was consistently low in the preferences shows that it is not the best type of illustration for promoting interest in the subject matter.

Since the Earliest "Flicker Days"

DA-LITE

(Reg. U.S. Pat. Off.)

HAS BEEN FIRST

THE DA-LITE CHALLENGER
America's most popular portable screen, can be set up anywhere in 15 seconds.

● **First to make large silver and white screens in seamless form.**

● **First to perfect a perforated screen for use in sound projection.**

● **First to perfect the Glass-Beaded fabric which has proved so superior for use with all sub-standard projectors. It is the most satisfactory surface for all practical viewing angles.**

● **First to perfect an "all-in-one" tripod screen of simplified design. The ever-growing popularity of the Da-Lite Challenger is the best proof of its superiority. This widely imitated tripod screen remains unequalled for its ease of operation and for its rigid durable construction.**

● **First to make an electrically operated screen for school use. A flick of the switch unrolls or rerolls the Da-Lite Electrol Screen. It is the only truly automatic screen on the market today for non-theatrical use.**

● **First to develop a complete line of projection screens to meet all school requirements. Da-Lite offers the broadest selection of sizes and styles of mountings. When you choose Da-Lite, there is no need to compromise on a certain size of screen surface. You can get a Da-Lite screen in the exact size or style you need from 22 x 30 inches up to 20 x 20 feet for actually less than your second choice screen would cost.**

Write for new Da-Lite catalog, which describes the complete line of Da-Lite models and gives many helpful suggestions on the selection and care of school projection screens.

DA-LITE SCREEN COMPANY, INC.
Dept. 12ES, 2723 No. Crawford Ave. Chicago, Ill.

SCHOOL MADE MOTION PICTURES

By HARDY R. FINCH
Head of the English Department
Greenwich High School, Greenwich, Conn.

With a question box on the making of school film productions, conducted by
GODFREY ELLIOTT, Oakvale, W. Va.
Readers are invited to submit questions.

SCHOOL film production is in the news again. The Education Page of the November 18 *Christian Science Monitor* showed four pictures of school film producers accompanied by an article on "Producing School Movies." The December 1 issue of *Time* magazine displayed a picture of students at J. C. Murphy Junior High School, Atlanta, making a film in connection with the Thirty-First Annual Meeting of the National Council of Teachers of English.

Throughout the United States, school film production groups are making news and are making educational history. Today these producers are viewed as experimenters, but tomorrow they will be looked upon as more important to the school program than the school newspaper or the school debating club.

Reports on Films

California

Hester School at The Alameda, has produced a documentary film in color on *The Santa Clara Valley.* The 400-foot film, made by the sixth grade and Miss Ruth O. Bradley, is in four sections: Historical Points, Scenic Beauty, Civic Interests, and Industrial Advantages.

West Virginia

The Mercer County (W. Va.) Schools have just completed production of a teacher-training film especially designed for use in the one-teacher school field. The new film, *Time to Spare,* is a two-reel sound-on-film subject. Through screen picture and narrator's comment it explains one way in which the daily schedule of the isolated one-teacher school can be organized to provide sufficient time for the individual and group attention that pupils need. It uses a typical one-teacher school already organized in this fashion to illustrate the important points of teacher-pupil planning and execution of the two major time blocks of the school day. The film attempts to show in a positive way how pupils in the one teacher school can be organized in broad ability groups, thereby giving both teacher and pupil much more time than would be found under traditional plans of organization.

Scene from a film produced by Mercer County Schools, W. Va.

This film is specifically designed as a teacher-training film for use with the personnel of one-teacher schools, either in the pre-service college period or for in-service training of such workers through their study groups, institutes, and other local meetings.

Correspondence concerning sale or rental of prints should be addressed to: The Audio-Visual Aids Service, Mercer County Schools, Princeton, W. Va.

Kansas

Caldwell High School reports a 200-foot film on *Homecoming,* showing a parade and other activities of the day. K. R. Hinkhouse was the film director.

New York

Charles Cook, author of *Cinema Handbook* (Fieldston School, New York, 1940, $1.50), reports that his Cinema Arts classes have made a film version of *The Fieldston Plan,* 500 feet with sound. Other films made by Mr. Cook's students recently include *Anthracite, Posture, Fall Sports,* and a newsreel.

Philip Livingston Junior High School, pioneer in the public relations film field, has made a revision of its all-color *Day in a Junior High School* (1200 feet). According to Theodore W. Cassavant, counselor for boys, it is "the visualization of the curriculum of the modern Red Schoolhouse. It shows the adaptation of the school program to fit individual differences in pupils' needs, interests, abilities, and aptitudes."

Ohio

A film showing faculty members of a college how to order films for their lecture rooms has been made by Melvin Moorhouse at Muskingum College, New Concord, Ohio. The film, *Films for the Classroom at Muskingum,* is on 8mm. stock and is 200 feet in length. Future plans for the Muskingum producer include the making of a film to show the operation and care of a projector.

John Hay High School, Cleveland, has made another film on typewriting techniques. The film is used in teaching typewriting to students. It was produced by the Commercial Curriculum Center in the school.

"Call of the Wilderness"
Wild life story of U. S. National Parks.
16mm S.O.F.
Write Dept. ES for free catalog of sound or silent films.
LEWIS *Film* SERVICE
216 E. First St. — Wichita, Kansas

Anthony Cope was the director of the production. (800 feet) Rental charge: $3.00.

Another film, *Activities for Girls in Junior and Senior High Schools,* is a color film (400 feet) on girls' gymnasium activities.

Aberrant Behavior in the White Rat is the subject of a film developed by Paul E. Fields and Ralph Turner of the Psychology Department, Ohio Wesleyan University, Delaware. In 400 feet, the film "shows white rats going through convulsions in response to high-pitched auditory stimulation. The general activity of the convulsive rate is higher than for normals, although respiration rate is lowered."

The funds raised by a 250-foot advertising film made at the Washington-Cessna School, Dola, helped in the purchase of film equipment, N. C. Rungst states.

Pennsylvania

The Reading Senior High School students have made a short posture film. This production, *Watch Your Posture,* reports Eloise E. S. Hettinger, advisor, "was a better and more effective force for better posture than any verbal criticism used by the teacher. . . . The film show each pupil's posture in an English class." (50 feet, 8mm.)

The life of students during a typical year at the Johnstown Center of the University of Pittsburgh, Johnstown, is the subject of a 1200-foot film made by C. A. Anderson. As new film subjects are discovered, new sequences are added to this publicity film.

Tennessee

Central High School, Memphis, has produced another melodrama on 8mm. stock. The latest release of the school photoplay club is *The Lady Killer, or Who Killed the Lady?* Dick Wooten, the club's cameraman, classifies the film as "ultra-modern, comedy murder plot." By means of camera angles and special lighting the club has tried to show its characters as unusual types.

Wisconsin

A revised edition of *From Nursery to Graduation or The Story of Our School* has appeared at the South Girls' Junior Trade School, Milwaukee. The film was made by Mr. Louthain.

Please send reports on new films, pictures of school film producers, and school film scenarios to your editor. New material of this type is always welcome. HARDY R. FINCH, Greenwich High School, Greenwich, Connecticut.

FACT or FICTION!

Whether you seek

EDUCATION or ENTERTAINMENT

you will find that

the VISUAL way is the BEST way!

INCREASE your knowledge of world affairs and home affairs; enjoy the thrills of your favorite sport in season and out of season; "See America" and travel to the four corners of the world; . . . or see Hollywood's greatest stars in their greatest pictures, just as they are shown on the screens of America's theatres!

Here are some of the outstanding dramatic, musical, and comedy successes of the year, pronounced by the leading motion picture critics as

"Pictures You Must Not Miss!"

Three Convulsing Comedies Starring Abbott & Costello!
Comedies that you can see over and over again. Critics and public were unanimous in their praise of

"BUCK PRIVATES"
A comedy of army rookies with Abbott & Costello and the Andrews Sisters.

"IN THE NAVY"
Abbott and Costello and Dick Powell and the Andrews Sisters.

"HOLD THAT GHOST"
Abbott and Costello, The Andrews Sisters and Ted Lewis and his band.

CHARLES BOYER and MARGARET SULLAVAN in
"BACK STREET"
Fannie Hurst's greatest novel brought to life on the screen.

DEANNA DURBN in
"NICE GIRL?"
Franchot Tone and Walter Brennan in Miss Durbin's finest picture.

"MODEL WIFE"
Another rollicking comedy, starring Joan Blondell and Dick Powell

"The Lady from Cheyenne"
A great picture, produced by Frank Lloyd, starring lovely Loretta Young.

Write Immediately to

Universal's Non-Theatrical Department for full information about these full length feature attractions as well as the most complete catalog of short-subject comedies, musicals, travelogues and animated cartoons ever assembled!

WRITE FOR FREE CATALOGUE No. 17

UNIVERSAL PICTURES COMPANY, INC.

Rockefeller Center New York, N. Y.
CIRCLE 7-7100

A New Educational Film ... in Natural Color

ANIMAL LIFE OF TROPICAL DRY TORTUGAS

Made by professional biologists at the Dry Tortugas, an isolated group of small coral islands in the Gulf of Mexico which are noted for their rich bird and marine life and for historic Fort Jefferson (the "Shark Island" of the movies).

Shown in their natural habitats are the birds which nest at Dry Tortugas (a National Bird Sanctuary for thousands of terns); remarkable tropical fishes of the Gulf stream; the rich animal life in coral reef tidal pools as well as shots of some of the spectacular forms of animal life encountered on a coral island.

Can be shown effectively to any audience. It could be used as a travelogue. The impression received from the film is almost as realistic as if the spectator had been a member of the expedition to Dry Tortugas. It is especially useful for general biology or nature study classes to demonstrate principles of color and form mimicry, ecology and coral island formation. Scenes of the Fort are included.

Fully titled, silent, 450 feet
16 mm. Kodachrome

Write immediately for a descriptive circular containing titles, scientific names of animals shown in the film and other information useful to the teacher or lecturer.

BIOLOGICAL INSTITUTE
Camac and Berks Sts. Philadelphia, Pa.

Question Box on School Film Production

1. **What does it cost to add sound to a reel of 16mm film?**

That would be like asking "How much does an automobile cost?" One can purchase an automobile anywhere within a price range of from several hundred to several thousand dollars, and the price range for recording and printing 16mm sound is almost as wide. In a recent informal survey made by this writer, prices for recording a narrator's voice and printing a combined picture and sound print of one reel of 16mm film ran from $65.00 to $700.00. It can be said, however, that recording of a fairly good quality can be obtained for $75-$150 per 16mm reel, this price to include the final combined print.

Readers who contemplate tackling a sound film production are urged to read the portions devoted to sound production in such references as *Students Make a Movie* and *Producing School Movies*. Also, this writer had a short article on introductory problems to adding sound in *Home Movies* for September 1941. If you are interested in adding sound to one of your productions, and your budget will not permit the spending of more than $150 per reel, names of studios will be furnished on request.

2. **How many photofloods is it possible to use on one circuit without danger of overloading?**

On the typical school building wiring circuit fused at 25-30 amperes it is possible to use not more than eight No. 1 photofloods or their equivalent without danger of overloading. This is slightly above the manufacturer's recommendation for ordinary house circuits which are usually fused at 15-20 amperes.

The manufacturer's rating on photofloods is as follows: No. 1—2.2 amperes; No. 2—4.4 amperes; No. 4—8.7 amperes. Thus, one could safely use either (1) eight No. 1, (2) four No. 2, (3) two No. 4, or (4) any equivalent combination. If mixing photoflood sizes, one No. 4 equals two No. 2 equals four No. 1.

This recommendation is predicated on the assumption that no other load will be placed on the same *fuse circuit*, and that this circuit is fused at not less than 25 amperes. If drawing the full maximum load from one circuit, avoid overloading the connecting wires by using two or three different outlets on the same circuit. Before determining the maximum possible load and making connections, always check the amperage of the fuses recommended for use in the panel board of your building.

3. **What is a "daylight-blue" photoflood, and where can they be obtained?**

A daylight-blue photoflood is a No. 1, No. 2, or No. 4 photoflood made with a blue dye in the glass shell which gives a color temperature matched to daylight film emulsions. When they are used the exposure meter reading can be based on the daylight emulsion speed of the film being used.

The daylight-blue photoflood finds its chief use as a booster light to be mixed with natural daylight when using color film. Its use enables the two types of light to be mixed without noticeable color distortion on the film.

Daylight-blue photofloods are manufactured by all of the standard lamp companies such as General Electric, Westinghouse, and Wabash, in the same sizes and amperage rating as regular photofloods, and at about twice the price of regular photofloods. General Electric's daylight-blue photofloods currently retail as follows: No. B-1—30 cents; No. B-2—60 cents; No. B-4—$1.75. Your camera store can supply them.

4. **How can we put wipes, dissolves, and fades in our film after it has been exposed and processed?**

Hollywood is able to insert effects in 35mm film by means of optical printing, but such facilities are not at present available on a practical basis for 16mm or 8mm film. There is, however, an inexpensive liquid dye on the market which permits the addition of fades to your film. It is obtainable from any camera store in the form of a powder which is then mixed with water to make enough solution to last indefinitely. Ask for "Craig Fotofade".

Motion Pictures Utilized in College English

(*Concluded from page* 420)

courses dealing with important phases of motion picture production and entertainment.

Interpretation. The general attitude toward the use of movies in teaching college English seems to vary from cool indifference to warm enthusiasm. Those who are cool toward the use of movies are particularly dubious about the Hollywood versions of the classics. Since a film gives but a small fraction of a novel, for example, seeing the film version can in no sense serve as a real substitute for reading the classic. In many respects, therefore, screenings of the classics may be "vitiating the coming generations' deep understanding and appreciation of the riches of world literature." On the whole, however, professors who make use of such screenings use them for comparative and critical purposes rather than as substitutes. This type of use seems to be both justifiable and profitable to students. At any rate, most of the professors who reported that they use motion pictures in English instruction, for one purpose or another, seem to think that they have many important teaching values that are not inherent in any other form of presentation. For example, one professor writes: "I regard films as possibly the best point at which the instructor can meet modern college students."

Perhaps a greater use of movies in college would help to achieve the objectives of a course offered by Dr. John L. Hamilton of the University of Minnesota, who writes: "The main objectives of the course are: to develop an aware, alive, sensitive theatre-goer; to increase the theatre-goer's pleasure in the theatre; and to organize the information and principles which help in developing a sensitive theatre-goer." To achieve these objectives, the students see about fourteen films and five plays. Dr. Edgar Dale of Ohio State University suggests another desirable outcome for the use of movies when he says, "One can readily grant that the final product has not in the past been too satisfactory. Yet I believe that a very critical study of the motion picture as an art form will tend in the long run to produce more effective and satisfactory motion pictures."

TRAINING for VICTORY
with Sound Motion Pictures

IN THE gigantic effort to weld this country into an effective fighting force—sound motion pictures are of tremendous importance. They play a vital role in training U. S. Army, Navy and Air Corps personnel . . . speeding up industrial production . . . training industrial workers . . . aiding in vocational education . . . making possible the more effective operation of government departments . . . providing morale-building entertainment to U. S. armed forces . . . and in disseminating important defense procedures to the general public. Ampro 16mm. silent and sound projectors, in ever-increasing numbers, are helping carry out this huge program.

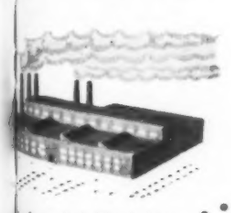
U. S. Navy Training

U. S. Army Training

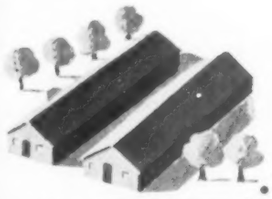
Governmental Departments

High Schools, Colleges

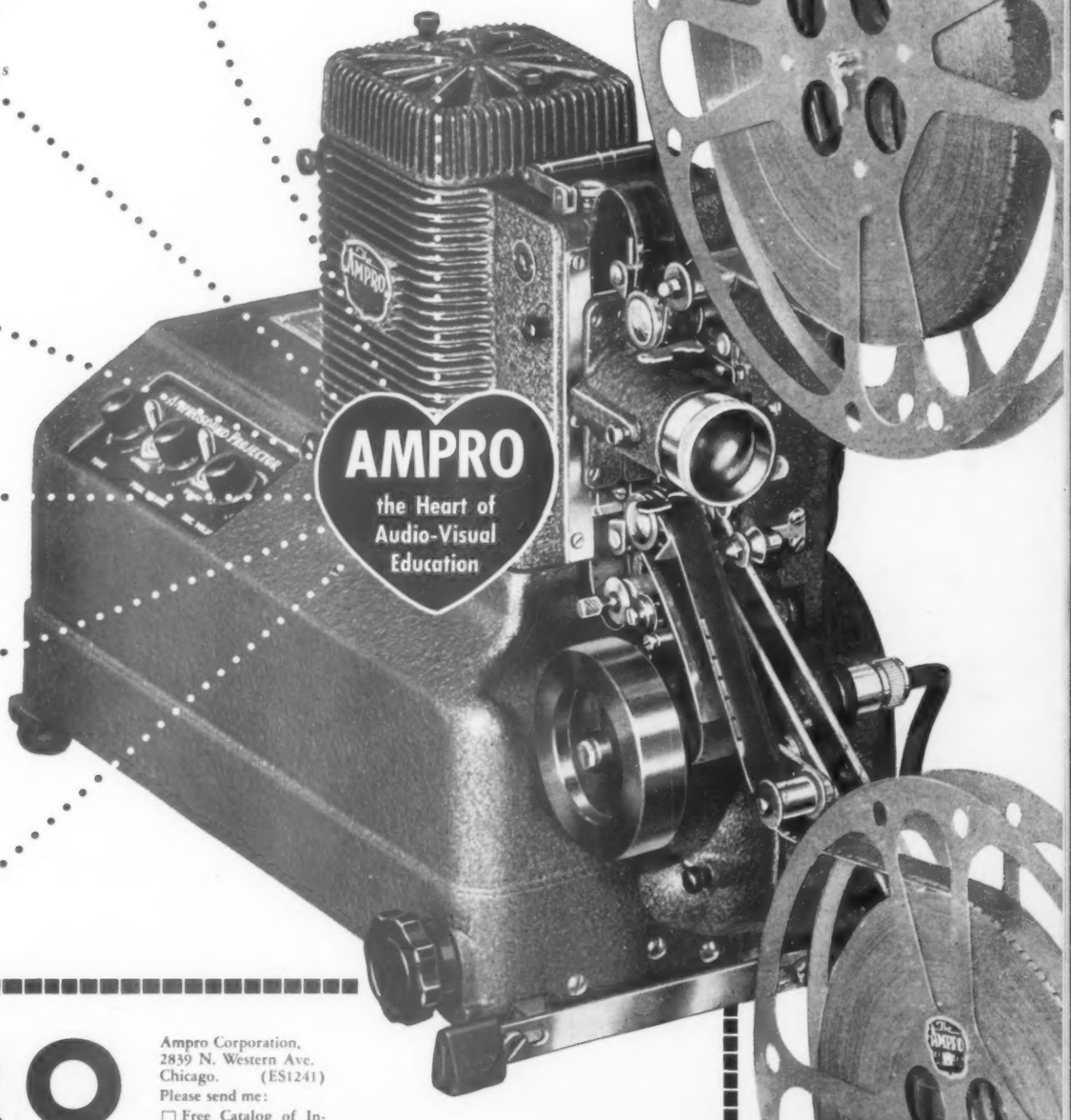
Army and Navy Air Corps



Industrial Training



Army Camp Programs



AMPRO

PRECISION CINE EQUIPMENT

2839 N. Western Ave. • Chicago, Illinois

Ampro Corporation,
2839 N. Western Ave.
Chicago. (ES1241)

Please send me:

☐ Free Catalog of Industrial Training Films of U. S. Office of Education.

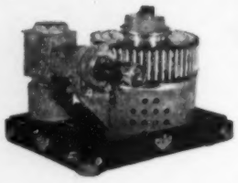
☐ Catalog of Ampro 16mm. Silent, Sound and Convertible to sound projectors.

Name

Address

City State

NOW! SELECTROSLIDE RENTAL SERVICE
for State Fairs—Conventions—Exhibits—Lectures



The ideal projection equipment with **automatic** or **remote** control for your 2" x 2" (35mm) film-slides, for rent by the day, week, month or longer periods.

"Standard" SELECTROSLIDE for 48 slides, with Projector accommodating bulbs from 300 to 1000 Watt.

"Compact" SELECTROSLIDE for 48 slides—limited to 200 Watt bulbs.

"Junior" SELECTROSLIDE for 16 slides limited to 200 Watt bulbs.

Write for our Rental Schedule and let us assist you in selecting the equipment best suited for your needs.

SPINDLER & SAUPPE, INC.
86 Third St. San Francisco, Calif.

"KNOW YOUR BIRDS"

NEW –16mm Color Film of Wild Bird Life
SERIES NO. 1 . . . ROBIN, BLUEBIRD, WOOD-THRUSH
SERIES NO. 2 . . . TITMOUSE, CHICKADEE, NUTHATCH
Ideal for your visual education program. Clear, large titles. Masterful new technique. Mr. Geo. B. Thorp, Audubon Society, says, "High level of photographic artistry makes these pictures a pure delight."
Write for descriptive folder and special school price.
HEIDENKAMP NATURE PICTURES 538 Glen Arden Drive PITTSBURGH, PENNA.

"CHAMPIONSHIP BASKETBALL"—a teaching film
For Further Information and Complete Free Catalog Write
BAILEY FILM SERVICE
1651 Cosmo St. Hollywood, Calif.

"Educational Films of Merit"
SOUND AND SILENT CLASSROOM FILMS

SLIDES General Science, 11 rolls, $20.00
35 mm. Principles of Physics, 7 rolls, $12.00
FILM Principles of Chemistry, 8 rolls, $14.00
Fundamentals of Biology, 6 rolls, $13.50
Write for catalog and sample strips of typical frames.
VISUAL SCIENCES, Box 284E Suffern, New York

SON OF THE NAVY
Jean Parker & Jimmy Dunn
8 reels. 1 reel short free. $15. ($12.50 if series of films booked.)
A swell comedy for schools. A little orphan boy adopts a sailor for his "pop."
Send for our free catalogue of 16mm sound and silent films.
MANSE FILM LIBRARY 1521 DANA AVE. CINCINNATI, O.

FAIR FILM RENTALS
Complete 16 mm and 35 mm sound programs, features and shorts.
MUTUAL FILM SERVICE
282-284 So. Stowe Virginia, Ill.

8mm FILM RENTALS
To owners of 8mm personal movie equipment we offer the most complete 8mm Film Rental Library catalog ever issued. Largest selection; lowest rates. Also national 16mm sound and silent library. 8mm and 16mm cameras, projectors and still equipment at lowest cash prices or convenient monthly terms. What are your requirements?
MOGULL'S
61 W. 48th St. *"at Radio City"* New York, N. Y.

Your copy of the new 17th Edition of
"1000 and ONE"
The Blue Book of Films is waiting for you!
Price to subscribers of Educational Screen ONLY 25c
(75c to non-subscribers)
EDUCATIONAL SCREEN
64 East Lake Street Chicago, Ill.

News and

Visual Programs at State Teachers Meetings

Many state teachers association conventions, held this fall, included departmental programs on audio-visual education.

The Southwest Kansas Educational Conference was held at Meade, Kansas, on October 4. There was a well attended section entitled "Audio-Visual Aids Round Table", with H. L. Walton, Supervisor of Audio-Visual Aids, Garden City, acting as chairman. The program included a statement on the Fort Hays Teachers College Film Library Service by Dr. Ira O. Scott; a demonstration on still projection by Bryce Gleckler, Dodge City; and demonstration lessons. Hectographed material on various audio-visual aids applying to organized units was distributed to the audience.

Ford L. Lemler, Director, Bureau of Visual Education at the University of Michigan, gave an illustrated talk on "A Practical Visual Program for Your School" to the Indiana visual group which assembled in Indianapolis on Thursday afternoon during the two-day state association meeting October 23-24.

Minnesota teachers participated in seven division meetings throughout the state last month. The name of Ella Callista Clark, Winona State Teachers College, appeared on three of the visual section programs—at Mankato, October 16, at Rochester the following day, and at Saint Paul on October 24.

Nebraska also held district conventions at six points. Harold Griffin, Visual Aids Committee Chairman, Wayne State Teachers College, spoke on "Visualizing the Curriculum" at the meeting of District 3 in Norfolk, October 23. Visual programs were given also at Omaha and Grand Island.

The New Jersey Visual Education Association convened during the annual convention of the State Education Association November 8-11. Continuous showings of films and slides were conducted Saturday morning. At the Monday afternoon session Mr. Richard Ford of the British Library of Information, discussed "National Defense through Motion Pictures" and showed the latest British films. He was followed by Dr. Morton C. Kahn's motion picture lecture on "Djuka", story of the Bush Negro.

The annual meeting of the Virginia Education Association took place at Richmond November 19-21. The Audio-Visual group conducted a joint session with the Grammar Grade Teachers section on the morning of the 20th. It was devoted to discussions and demonstrations of visual aids.

Pasadena Visual Service Moves

The Library and Visual Service Department of the Pasadena City Schools has just moved into the Administration Annex Building of the Board of Education, at 1501 East Villa Street, where it is being consolidated with the School Museum. Harry H. Haworth, Supervisor of Library and Visual Service, is

Notes

in charge of the enlarged department, with Miss Helen Burr Durfee, Teacher-Librarian and Assistant Elementary Curriculum Coodinator, assisting.

Latin-American Cultural Relations Program

Kenneth MacGowan, Twentieth Century Fox producer, is now serving the United States as executive in charge of film production and distribution for the Nelson Rockefeller Committee known as the Office for Coordination of Commercial and Cultural Relations between the American Republics, Council of National Defense, of which John Hay Whitney is director. The purpose of this committee is to prepare suitable American film material for Latin American consumption, and to obtain films that will introduce our Southern neighbors to us in the right way.

Thirty 16mm sound projectors have been placed in the U. S. embassies and consulates in South America, through which the films will be distributed. The subjects have been selected from existing motion picture material, re-edited, and special sound-tracks made in Spanish and Portugese. The first group of films to go to the Southern continent include: "Power and the Land," "The City," twelve Erpi films, "This Amazing America" and other travel subjects, films made by the Office of Production Management and other government agencies.

The committee reports it has been more difficult to obtain films on Latin America, and would appreciate the assistance of amateur cameramen who have footage on those countries. Subjects so far acquired include thirty-nine color reels, twenty-nine of which concern Mexico and Central America. A tie-up has been made with March of Time for the use of material now being photographed in South America. What is needed particularly, Mr. MacGowan points out, are films of an editorial nature, like Julian Bryan's documentary "Americans All."

The Coordinator's offices are located at New York's Museum of Modern Art, 11 West 53rd Street, New York City.

Disney Studios Produce Training Films

The Canadian Government has commissioned the Walt Disney studios to produce animated films for training purposes. Production has already started on five short films, half of the footage being devoted to a technical military subject—the operation of a new anti-blitzkrieg weapon. Arrangements for the enlistment of the Disney studios were made by John Grierson, chief of the National Film Board.

Grierson's attention was directed to the use of Disney films for training purposes through the studio's recent offer to make training films at cost for the United States Government. Disney had backed up his offer with a sensational sample picture, teaching aircraft riveting, which used a revolutionary new technique.

MAJOR UNIVERSAL PICTURES
Now Released in 16 mm. Sound Film.
Shorts Accompany Each Picture To Make Up 1½ Hour Program.
HOUSE OF SEVEN GABLES
George Sanders, Margaret Lindsay
★
FIRST LOVE
Deanna Durbin, Helen Parrish, Robert Stack
★
WHEN THE DALTONS RODE
Randolph Scott, Kay Francis, Brian Donlevy
★
INVISIBLE MAN RETURNS
Sir Cedric Hardwicke, Vincent Price, Nan Grey
★
SANDY IS A LADY
Baby Sandy, Tom Brown, Nan Grey, Mischa Auer, Butch & Buddy
★
ALIAS THE DEACON
Bob Burns, Mischa Auer
RENTAL $17.50 each (FIRST LOVE—$20)
Advance approval required. One approval suffices for all pictures.
Send for Catalog listing 2200 Entertainment and Educational Subjects, for rental and sale.
WALTER O. GUTLOHN INC.
25 W. 45th St. Dept. E-12 New York

RADIO-MAT SLIDE CO.
TALK from your screen WITH your quickly TYPEWRITTEN MESSAGES
50 RADIO-MATS $1.50
White, Amber or Green. Accept no substitute.
IS THE STATIONERY OF THE SCREEN
MAKE YOUR OWN
TYPEWRITER SLIDES
For Screen Projection
USE RADIO MATS
on sale by Theatre Supply Dealers
Write for Free Sample
RADIO-MAT SLIDE CO., Inc.
1819 Broadway, Dept. V, New York City

"A PLACE TO LIVE"
A NEW DOCUMENTARY FILM ON THE VITAL PROBLEM OF
HOUSING
Told in Terms of People's Lives. Based on a Survey by the Philadelphia Housing Association
PRE-RELEASE COMMENTS
DR. JOHN T. GARMAN—Director of Visual Education Philadelphia Public Schools
"This film will be of great aid to teachers of social studies and home economics. Its appealing presentation of every day problems arouses a definite desire to find an answer."
THOMAS C. STOWELL, Division of Public Health Education, State of New York
"Congratulations . . . It is a real addition to documentary material on housing."
WALTER WANGER
"A timely subject and one of the best documentary jobs to date."
AVAILABLE NOW
2 reels, sound—18 minutes
Rental $3 per day Sale $72 per copy
WRITE FOR FREE SYNOPSIS NOW
BRANDON FILMS 1600 BROADWAY NEW YORK CITY

NEW FILMS OF THE MONTH

As They Look to A Teacher Committee

Conducted by DON WHITE

In Charge of Audio-Visual Extension Service
Division of General Extension,
University System of Georgia, Atlanta

This monthly page of reviews is conducted for the benefit of educational film producers and users alike. The comments and criticisms of both are cordially invited.

Producers wishing to have new films reviewed on this page should write Don White at 223 Walton Street, N. W., Atlanta, Georgia, giving details as to length, content, basis of availability, and prices of the films. They will be informed of the first open date when the Teacher Committee will review the films. The only cost to producers for the service is the cost of transporting the prints to and from Atlanta, WHICH MUST BE BORNE BY THE PRODUCERS.

Peoples of Canada (Canadian Film Board) 21 minutes, 16mm sound, Sale Price $30.00. Apply to producer for rental sources.

This "documentary" film emphasizes that peoples of many different nationalities and creeds are combined to make modern Canada. It begins with scenes of the rugged countryside as the narrator tells how the navigators of five centuries ago sought a new trade route to India, but found their way blocked by a mighty continent. How their followers unrolled the map of that continent is the story of the peoples of Canada.

First, scenes of the French Canadian people of Quebec tell of their self-reliance, respect for family, reverence for religion, and their deep-rooted communities. Then the farmers of the Maritime provinces are pictured: the thrifty Scots, the Loyalists who came from the United States following the Revolutionary War, the Britons, Dutch, and the Germans, who are famous as carpenters. Toronto is next pictured as a modern city of commerce whose populace includes Englishmen, Orangemen, and Scots. The camera turns westward, toward the plains, where the pioneers settled in the early nineteenth century. Then came the railroads, and immigration from Central and Eastern Europe; spires symbolic of many faiths rose into the Canadian skies, and on the village streets the crowds still speak in a dozen languages. But the towering grain elevators symbolize the unity which binds them together as farmers and as Canadians. The Western mountains formed the last great barrier; but surveyors came to lay out routes for rail and road, and the construction gangs, again of all races, finished the job, unrolling the map of Canada from coast to coast, and fulfilling the explorers' dreams. As the film ends the narrator emphasizes that all these peoples are now united into one nation, which looks to its children for further progress.

COMMITTEE OPINION: A good film for classes in sociology, for various studies in social science, and for general showings, from the junior high through adult levels. Photography, sound, and organization are uniformly good, and the film contains no noticeable propaganda of any kind.

Properties of Water (Coronet) 11 minutes, 16mm sound. Sale price $40.00. Apply to producer for rental sources.

Subtitles divide this film into separate sequences, in which laboratory experiments demonstrate the various properties of water. First, experiments with electrolysis show the composition of water. Next, boiling is demonstrated, with reference to variations in boiling point due to pressure changes. In the following sequence a condenser demonstrates distillation. Solubility of gases in water is illustrated, and then miscible solutions are compared. Copper sulphate is dissolved to demonstrate a saturated solution. Evaporation causes crystals to form, which are filtered out of the solution. Crystallization is demonstrated as a saturated solution of potassium nitrate is cooled. Then supersaturation is demonstrated; the supersaturated solution is disturbed and immediate crystallization results, with a temperature increase. The use of water as a standard of comparison is next shown, and then heat of fusion and heat of vaporization. At the end of the film there is a brief summary.

COMMITTEE OPINION: An excellent film for use in general science and chemistry classes at the junior high, senior high and college levels. Content is accurate, organization is good, and the various experiments are clearly pictured. Photography and sound are well above the average.

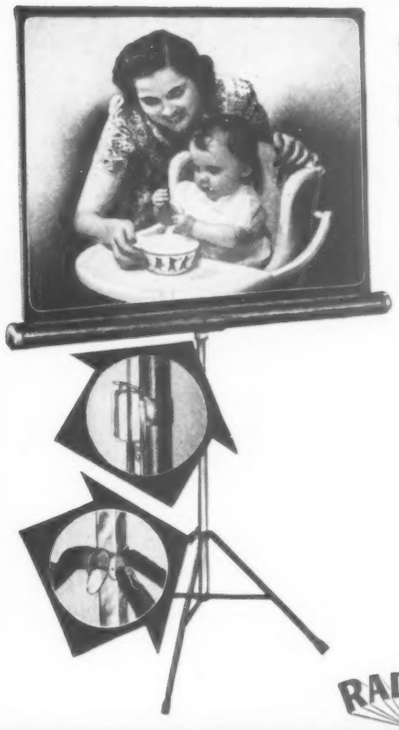
Pneumonia (Erpi) 11 minutes, 16mm sound. Sale price $50.00. Teacher's guide to be furnished.

This film outlines modern methods for the control of pneumonia, one of man's most deadly enemies. It begins with a general discussion of pneumonia. Graphs show fatalities resulting from the disease and compare it to others; the physician's methods of treatment and the ways in which the disease is transmitted are demonstrated, and the classes of people who are particularly susceptible are mentioned. Then a dramatization of a typical case begins.

Ed McGrath, a telephone company trouble-shooter, comes home with a chill. Here animated diagrams are interspersed to show the inflammation of his lung. His wife puts him to bed and calls a doctor, who upon arrival notes his condition, takes blood

HOLMES
Sound-on-Film Projectors
THE UNIVERSAL CHOICE
Holmes projectors are the last word in brilliant picture and sound reproduction. This is accomplished by 22 unusual features that distinguish the Holmes from ordinary projectors — built-in stability and performance that cannot be excelled.
★ That's why the Holmes machine is ★ the preference of so many institutions of learning who recognize its adaptability for both visual education and entertainment.
HOLMES 16mm Projector with High Intensity Arc Lamp
Also made with low Intensity Arc Lamp
Holmes portable projectors are available with sound equipment, speakers, amplifying systems and microphones for interchangeable use in class rooms, assembly halls, auditoriums, lecture tours, gymnasiums, athletic fields, etc.
WRITE FOR FREE DEMONSTRATION AND CATALOG
HOLMES PROJECTOR CO.
Manufacturers of 16mm and 35mm sound projectors
1813 ORCHARD STREET CHICAGO
EASY TO THREAD, ADJUST AND OPERATE

NOW — for the first time — an AUTOMATIC SCREEN



Of course, it's a **RADIANT**

New and different in ease of operation. Minimum weight— Maximum Solidity

Here, at last, is the portability, the quick ease of erection, you've longed for in a projection screen. And all without side-sway, wrinkles or sags. *The new RADIANT Automatic has no rival.* Touch a convenient lever— the tripod legs *slide* into position and *lock* there automatically. Turn the screen case—*automatically* it locks into sturdy horizontal position. An effortless pull—*automatically* your screen locks into *any* viewing position, 17 to 50 inches from the floor.

—And, of course, the famous Radiant "Hy-Flect" Screen Surface

Tiny glass beads, firmly embedded in crystal clear plastic, give unsurpassed brilliance and clear definition. A lifetime guarantee of whiteness exclusive with Radiant. To get the BEST in screens, specify RADIANT! Write for new illustrated folder—free.

Complete Line of Sizes and Types

- **Portable Tripod Screens in all sizes from 30 x 40 up to 70 x 94 inches.**
- **Gear Operated Portable Tripod Screens, 52 x 72 to 70 x 94 inches.**
- **Wall Type Screens, 30 x 40 to 72 x 72 inches.**
- **Wall and Ceiling Screens, 6 x 8 to 12 x 12 feet.**

RADIANT MANUFACTURING COMPANY 1140-6 Superior St., Chicago

and sputum samples, and begins a drug treatment immediately while waiting for a report from the laboratory where the sputum is being examined to determine the type of pneumonia present. When it is established that the patient has Type 1 pneumonia, the doctor proceeds to administer further treatment. The fever-weakened patient receives fruit juices, and the nurse makes him as comfortable as possible. A drop in the fever begins. A later analysis shows the presence of germs in the blood stream. Serum is administered. A day later, the results of the treatment appear as the patient begins to improve. There is easier breathing, much sleep, and a drop in his temperature. When McGrath is out of danger, his wife takes over the work of the nurse, and his improvement continues. The doctor comes for a final visit and advises ample rest, fresh air, and nourishing food during convalescence.

Animated diagrams show how the disease clears up in the lung. Precautions against relapse are next mentioned, and in closing the narrator emphasizes that if the doctor is called quickly so that proper diagnosis and typing may be made, if the correct drugs and serums are administered, and if the patient has proper diet and a capable nurse, his chances for recovery are very good.

COMMITTEE OPINION: A very good film for use in health, hygiene, public health, and home economics classes, at the junior high through adult levels. The film is good in all technical respects.

Oil for Aladdin's Lamp (Shell) 3 reels, 16mm sound, "free." Produced by the J. Walter Thompson Company. Directed by Joris Ivens; photographed by Floyd Crosby, A. S. C.

In this film scenes in the research laboratories of the Shell Development Company at Emeryville, California, tell of petroleum research and its importance in the development of many products useful in our daily lives. It opens with a dedication to research scientists and a rapid succession of scenes showing some of the marvels of chemical research. A shot of dirty, gummy crude oil introduces an explanation of the molecular composition of petroleum. A model of a typical hydrocarbon molecule is shown, and it is explained that various products are derived by changing the arrangement of the atoms and by removing some of them. Some of the concrete results of petroleum research, such as butiadene synthetic rubber, concentrated Vitamin E, and plastics, are shown. An example of direct benefit to motorists is cited in the discovery of the Shell "Solutizer" process which reduces motor knock. Importance of proper engine lubrication and the work of experimentation to improve Shell oils are also shown. Scenes of mechanized Army units, of battleships at sea, and of planes in flight next appear as the narrator speaks of the value of Shell research to the defense program. The function of further research and the use of the small-scale pilot plant in establishing processes for commercial production are mentioned. The film closes with an expression of confidence in the ability of the Shell laboratories to produce results to meet tomorrow's demands, and with the statement that in the meantime every Shell station has the products to fill today's needs.

COMMITTEE OPINION: A good film to cover one specific phase of chemical research; should be of value at the junior high level and above, in chemistry and general science classes, and also for general showings to stimulate interest in chemistry and research. Advertising content is indicated in the foregoing description; the film contains some advertising and the sponsor's name is repeated occasionally, but the advertising content of the film is not considered objectionable. Photography and sound are good.

Producers and Distributors:

Coronet Productions, Glenview, Ill.

National Film Board of Canada, 59 East Van Buren Street, Chicago, Ill.

Erpi Classroom Films, Inc., 35-11 Thirty-Fifth Avenue, Long Island City, N. Y.

Shell Oil Company, Public Relations Department, 50 West 50th Street, New York, N. Y. For nearest source of prints for school use write the Association of School Film Libraries, Room 819, No. 9 Rockefeller Plaza, New York, N. Y.

Current Film News

■ Bell & Howell Company, 1801 Larchmont Ave., Chicago, reports the acquisition of many new subjects, among them the following:

Ski Symphony; Milady Takes to Skiis—two newcomers to the list of alpine skiing films in the Filmosound Library. They are single reels with musical background instead of narration, and present thrilling photography of snowscape and winter sport. Others in the same series, previously released by other distributors but now taken over exclusively by Bell & Howell are: *Skiing with Hannes Schneider, High School of Skiing, Snowscapes, Winter Magic, Rock and Ice, Winter Holiday.*

The series of single color reels entitled "Our Colorful World" is being augmented by several new arrivals:

In the Wake of the Beagle, which traces the historic journey of Darwin from Tierra DelFuego to the Galapagos.

Desert in Bloom, showing the flora and fauna of the southern Arizona desert and the practical work of a group of naturalists who assemble a habitat group for their museum.

Northwest in Bloom, depicting the flowers of Oregon and Washington in natural color.

The Real Hawaii, by Leroy Segall, presenting the principal industries, sugar, fruit, tourists, mixture of peoples, survivals of native life, and defense. A similar film on "Porto Rico," by George Greenwood, is also available.

Navajo Sand Painting, photographed in Monument Valley by Jack Breed.

American Frontiers, an animated talking map in color, showing the expansion of our boundaries.

A reduction in the rental price of over 200 recreational feature films, some amounting to as much as 50%, has just been announced by Bell & Howell's Filmosound Library. Still further reductions are offered to "Annual Service" patrons.

■ Biological Institute, Camac and Berks Streets, Philadelphia, Pa., announces a new film on tropical marine and bird life for general biology classes, produced by three professional biologists at the Dry Tortugas.

Animal Life of Tropical Dry Tortugas—1 reel, 16mm silent, color—shows some spectacular members of the variety of tropical fish which inhabit the warm waters of the reefs, life in coral reef tidal pools, and the thousands of birds which nest there. In addition to showing the normal behavior of a variety of invertebrates, fishes and birds in their natural environment, the film emphasizes certain special characteristics common to a number of these animals.

Because the Dry Tortugas islands themselves are of historic interest, this subject lends itself also to a discussion of their history and geography. Fort Jefferson, also seen in the film, is of particular historic interest.

■ Walter O. Gutlohn, Inc., 35 W. 45th St., New York City, has released a new one-reel color documentary film in 16mm silent, entitled:

An Elementary Activity School—showing the operation of the progressive school at the famed government-created community of Green Belt, Maryland.

Gutlohn also announces the release of three new major Universal features in 16mm sound. With each picture are shorts to make up an hour and a half program. Advance approval is required, but one approval suffices for all. The pictures are:

House of Seven Gables—featuring George Sanders, Margaret Lindsay—a screen version of Nathaniel Hawthorne's dramatic story of a curse that persisted through the ages, and a love that could not be defeated by misfortune and disaster. Only slight changes were made from the original story.

Sandy Is a Lady—comedy with Tom Brown, Nan Grey, Mischa Auer, Butch and Buddy. The hair-raising adventures of the baby star, who wanders off alone, keeps the picture moving at a lively pace.

Alias the Deacon—a merry comedy starring Bob Burns. An amiable card sharp masquerades as a deacon while he solves the troubles of his friends.

■ Castle Films, Inc., 30 Rockefeller Plaza, New York City, have completed their annual motion picture football review of the current gridiron season. Designed primarily as a picture of action and sport excitement, these releases have also served as aids to coaches, demonstrating as they do the stellar plays of the best collegiate elevens of each season.

Football Thrills of 1941 will include all that anyone saw of the trick play that made the Minnesota-Northwestern game famous. The long run down the sidelines to a touchdown, with bewildered opponents pulling themselves together and charging in pursuit is shown. But the trick itself escaped cameramen as it did spectators and sports reporters. The high spots of the following 1941 contests will also be seen in the annual sportfilm classic: Army-Navy; Harvard-Yale; Duke-Georgia Tech; Princeton-Yale; St. Mary's-Duquesne; Columbia-Princeton; Michigan State-Santa Clara; Navy-Notre Dame; Fordham-Southern Methodist; Minnesota-Northwestern.

■ Audio-Film Libraries, 661 Bloomfield Ave., Bloomfield, N. J., have available for both rental and sale, in 16mm sound, a series of "Pioneer Life Films," (with Study Guides) from the studio of Arthur Barr Productions in Pasadena, Cal. Four subjects, one reel each, are now ready:

Kentuckie Rifle—showing the pioneer's dependence on his rifle for hunting and protection, the molding of shot on the hearth, the establishment of homes in the wilderness.

Candle Making—cutting the wicks, preparing the tallow, dipping the candle rods, and trimming the candles. Whole family participates in the activities.

The Spinning Wheel—carding of wool, the rolling of curls, spinning into yarn, twisting and drawing into the spindle, and winding on the bobbin.

Placer Gold—explaining simple tools and methods used.

■ Bailey Film Service, 1651 Cosmo St., Hollywood, California, has a film which should be added to the growing list of subjects on the defense theme, namely:

Iron Mining and Manufacture—1 reel, 16mm silent—telling the dramatic story of iron ore from the open pit mines near Marquette, Michigan, to the blast furnace where it is transformed into pig iron. Factory scenes show the iron being remelted in the cupola, molded, poured, and the castings finished ready for assembly. A study guide is included with the film which is suggested for use in shop and chemistry, geography, history and social science classes.

High Honor Bestowed on Late Herman A. DeVry

The name of the late Herman A. DeVry, D. S., pioneer Chicago motion picture equipment manufacturer, engineer and inventor, who produced and marketed the first portable motion picture projector and was responsible for many basic patents that benefited the entire motion picture industry, will be perpetuated along with such other famous and distinguished immortals as Thomas Alva Edison and George Eastman by the Society of Motion Picture Engineers.

By unanimous decision the members of the SMPE, while in executive session during the recent convention in New York City, approved the proposal of the Society's Board of Governors that the name of Herman A. DeVry be added to the Society's Honor Roll. This Honor Roll, international in scope, was established in 1931 for the purpose of perpetuating the names of distinguished pioneers who are now deceased.

Mr. DeVry becomes the first Chicagoan, only Midwesterner and the fifth American to be so honored by this internationally recognized Society.

Distributor's Group to Larger Quarters

Having outgrown its former quarters at 119 Luckie Street, Atlanta, Georgia, the Distributor's Group reports removal to a new and larger home at 756 Peachtree Street. Their greatly expanded facilities include a comfortable projection room, double their former shipping capacity, and three decorated display rooms. This well-known dealer organization has long served the schools of the South with a complete line of equipment for visual instruction representing the products of leading manufacturers, including projection equipment, for both motion and still pictures, screens and recorders, as well as a large library of 16mm motion pictures.

Index to Volume XX (1941)

DIVERSITORIALS — No. Page

A Letter to the U. S. Post Office—A Matter of Typography—At Least a Second Term—The Program Reprinted—The National Film Evaluation Project ..... Feb. 50
The Boston Business Meeting—Three "New" Departments—Summer Courses in Visual Instruction ..... June 230

FORMAL ARTICLES
(Arranged Alphabetically by Authors)

Bearl, Herbert, Technical Films in the Camp Program ..... May 196
Berg, Esther L., Use of Filmstrip to Assist Retarded Readers. Sept. 281
Brown, Evelyn S., A School-Made Film Which Stands on Its Own Feet ..... Apr. 144
Cobbs, Carl T., Use of Natural Science Sound Films in Primary Grades ..... Feb. 57
De Bernardis, Amo, Audio-Visual Aids and National Defense. Feb. 55
Dickter, M. Richard, How to Choose a Still Camera ..... Jan. 11
Edland, Wayne, Air Your School ..... Sept. 282
Ellis, Pauline J., and *Larson, L. C.,* National Film Evaluation Cards Adapted to the Needs of an Extension Library .... June 239
Emmert, Wilber, History and Geography Integrated through a Study Travel Workshop Course ..... Nov. 386
Fiaschetti, Frank J., School Movies to Educate the Public .... Nov. 380
Glenn, W. Edgar, and *Gordon, James L.,* An Assembly Project Developed by School Photographic Clubs ..... Jan. 13
Goodman, Louis S., Film Forum: A Technique in Adult Education ..... Oct. 330
Gregory, William M., Audio-Visual Aids to Elementary Instruction in a Small City ..... Nov. 375
Haskew, L. D., Sound Recordings for School Use ..... May 193
Holland, B. F., and *Netterville, Dora G.,* Motion Pictures Utilized in College English ..... Dec. 418
Jayne, Clarence D., Making Pictures Teach ..... May 191, June 233
Knowlton, Daniel C., The Factor of Selection in the Use of Visual Aids ..... Feb. 53
Krows, Arthur Edwin, Motion Pictures—Not for Theatres Jan. 15, Feb. 61, Mar. 107, Apr. 150, May 198, June 241, Sept. 284, Oct. 333, Nov. 383, Dec. 427.
Kruglak, Haym, The Specialized Field Trip ..... Oct. 341
Lee, Kathleen L., Democracy at Work through Visual Education ..... June 231
Livermon, Ruth, Living with Chinese Children ..... Sept. 278
Halstrom, H. W., Student Operation of Visual Education Equipment ..... June 236
Miller, Clyde K., Jack Finds a Way ..... Mar. 104
Miller, Earl B., Combining Motion Pictures with Slides and Sound ..... Apr. 148
Mogan, Martha, Audio-Visual Education in the Small Woman's Junior College ..... May 194
Olsen, Edward G., Community Study Is Realistic Education. June 244
Palmer, Harris C., A Filmstrip for School-Community Relations ..... Oct. 329
Palomo, J. R., The Sound Film: A Challenge to Language Teachers ..... Mar. 106
Perkins, Earle B., Biological Film Production at Rutgers .... Feb. 59
Post, Muriel, Educating for Patriotism ..... Mar. 102
Ray, Frances B., Selecting Films for Children's Programs .. Nov. 378
Roberts, Alvin B., The Nation, Our Campus ..... Jan. 5
Ten Commandments and a Film ..... Oct. 326
Thomas, Charles R., A Visual and Sound Section for a College General Extension Division ..... Nov. 382
Veblen, Paul, and *Kissack, R. A. Jr.,* Minnesota's Growing Visual Education Service ..... Jan. 9
Wagner, William S., Between the Lines ..... Dec. 423
Wattenberg, William W., Education through Socially Useful Work ..... Dec. 425
Winchell, Lawrence R., Values of Visual Aids in Reading .. Dec. 421

THE DEPARTMENT OF VISUAL INSTRUCTION
(Conducted by JAMES D. FINN)

Program Winter Meeting of DVI at Atlantic City—Membership Roster—Notes ..... Jan. 21-24
To the Members—Two Letters—Notes ..... Feb. 69-71
Proceedings of the Winter Meeting of the D. V. I. The Challenge of the Unsolved Problems (*Paul C. Reed*)—Education in Defense of Democracy (*Ralph W. Tyler*)—The Wartime Use of Motion Pictures in Britain (*Richard R. Ford*)—The Latest Survey of College and High School Motion Picture Equipment (*Nathan D. Golden*)—Criteria for Selecting Motion Picture Projection Equipment (*John A. Maurer*) ..... Mar. 110-19
How Can We Bring about Better Utilization of Visual Materials? (*Ford L. Lemler*)—What Visual Aids Are Schools Producing? (*William G. Hart*)—The Visual Aids We Have for Defense Education (*Blake Cochran*)—Free Materials—A Blessing or a Blight for Education? (*O. H. Coelln, Boyd B. Rakestraw, Godfrey Elliott, Ernest R. LaFollette, William H. Hartley, Donald W. Smith*)—Minutes of the Meeting of the Committee on Field Experiences ..... Apr. 153-161
Nominating Committee—Summer Meeting—Insignia—Notes. Apr. 164
The Zonal Plan Takes Shape—To the Members—Notes .... May 204-07
A Proposal for Closer Coordination between the DVI and the NEA—Program of Summer Meeting at Boston—Membership Roster—Notes ..... June 245-49
The President's Letter—Minutes of Executive Committee Meeting, Boston—Minutes of Annual Business Meeting—DVI Officers for 1941-42—Notes ..... Sept. 293-94
Zone VII Announces Its First Official DVI Zone Meeting—A Resolution—William H. Gregory Retires; Max R. Klein Succeeds ..... Oct. 340
The Zonal Organization—Zone Activities ..... Nov. 391
Miscellaneous Notes ..... Dec. 430

THE LITERATURE IN VISUAL INSTRUCTION
(Conducted by ETTA SCHNEIDER)

History, Trends, Principles of Visual Education

Role of Visual Materials in Education (*Edgar Dale,* Cal. Jl. Sec. Ed.); Audio-Visual Aids: Relation to Learning Process (*H. H. Haworth,* Sierra Ed. News)—Mar. 120. . . Notes on the Historical Background of Visual Education (*M. M. Brien,* Ed.)—Apr. 174. . . Trends in Audio-Visual Aids (*Ward Bowen,* N. Y. Ed.); Educational Implications of Motion Pictures (*W. W. Whittinghill,* Mich. Ed. Jl)—May 202. . . The Public Arts and Democracy (*Edgar Dale,* High Pts); Educational Use of Motion Pictures Grows Apace (Sch. & Soc.)—Oct. 343. . . Recent Trends in Visual Instruction (*G. F. Johnson,* Jl, Biol. Photog. Assn.)—Nov. 388.

Administration of Visual Aids, Equipment

Why Certain Difficulties Are Encountered in Handling School Films (*B. A. Aughinbaugh,* Ohio Sch.); How Greenwich Manages Its School Films (*Eleanor Child,* Amer. Sch. Bd. Jl.); Man Who Launched Visual Education in Rural Schools of Texas (*H. T. Musselman,* Tex. Outlook)—Jan. 20; Movie Projectors (Consumers Union); Commercial Motion Picture Production with 16mm Equipment (*J. A. Maurer,* Jl. S.M.P.E.)—Jan. 30. . . .Cooperative Film Library Movement (*H. A. Gray,* Sch. Mgmt.); Celluloid Servants (*R. R. White,* Me. Tchr. Dig.); Visual Aid Experiment in Southwest Virginia (*I. R. Silverman*), Making Way for Audio-Visual Education (*W. H. Bowen, Jr.*) (Va. Jl. Ed.)—Feb. 67. . . . A Proposed Visual Program for California (*H. M. McPherson*), Ventura County's Program of Visual Education (*Persis Hamilton*) (Cal. Jl.)—Mar. 120. . . . A Director of Visual Instruction (*Roy Wenger,* Soc. Studies); Equipping a Room for Visual Instruction (*W. T. Kutsche,* Ed.); Modern Visual Education at Work (*L. W. Olson,* Minn. Jl. Ed.)—Apr. 174. . . . Visual Education Program (*R. F. Blankenbaker,* Sch. & Com.); Projecting Motion Pictures in the Classroom (*F. W. Noel,* Amer. Council Ed.); Audio-Visual Resources (*A. Vander Meer-J. W. Brown*), Needed: A Visual Director (*G. Jensen*) (Wash. Ed. Jl.)—May 202. . . . The County Film Library: A Handbook (Godfrey Elliott); Cooperative Film Exchange (*L. H. Westfall,* N. Y. Ed.)—June 252. . . . Use of Visual and Auditory Aids in CCC Camps (*H. W. Oxley,* Sch. Life)—Sept. 298. . . . Visual Aids Club (*Don Williams,* Cl. House); There's No Excuse for Not Using Visual Aids (*C. T. Smith,* Sch. Exec.); Recommended Procedure and Equipment Specifications for Educational 16mm Projection (Jl. S.M.P.E.)—Nov. 388-89. . . . The School Librarian and the Audio-Visual Program (*Thelma Kidd,* Va. Jl. Ed.)—Dec. 431.

Techniques of Utilization and Teachers Guides

Visualizing Astronomy (*Ruth Livermon,* Scholastic); A Housing Study (*J. C. Baumgartner,* Soc. Ed.); Use of Newer Types of Instructional Materials (*Lillian Lamoreaux,* Yrbk. Dept. Supvr. and Dir. of Instruction NEA)—Jan. 20, 30. . . . Curriculum Implications of Motion Pictures (*C. F. Hoban, Jr.,* Cur. Jl.); Use of Films in the First Grade (*M. Wheeler,* Wash. Ed. Jl.); Classroom Use of Films (*Roy Wenger,* Soc. Studies); How Teachers Use Movies (*H. R. Finch-E. D. Child,* Movie Makers)—Feb. 66. . . . Use of Motion Pictures as Curriculum Aid (*Lillian Lamoreaux*), Using Visual Aids in a Social Science Unit (*H. C. Walters-F. W. Noel*), Audio-Visual Materials in Modern Instruction (*Gardner Hart*) (Cal. Jl. Sec. Ed.); Pictures in Social Studies Teaching (*L. S. March,* Soc. Ed.)—Mar. 120-1. . . . Library Film Forums on National Defense (*Alice Bryan,* Lib. Jl.); The Film in the English Class (*K. Helfer-R. Rosiny,* Eng. Jl.); Teaching Americanism through Use of Filmstrip (*Camilla Best,* Ed.); A Follow-up Survey through Visual Aids (*H. L. Cleland,* Occupations); How to Explore for Visual Materials (*Marion Israel,* Cal. Jl. Sec. Ed.)— Apr. 174. . . . Toward an Enlightened Patriotism (*Edgar Dale,* News Letter); Use of Visual Materials in Elementary Science (*Mary Steel,* Sci. Ed.)—May 202-3 . . . Audio-Visual Aids for Rural Schools (*Etta Schneider,* Cur. Jl.); Visual Education and the Deaf (*W. J. McClure,* Amer. Annals of Deaf); Use of Visual Aids in Teaching Tennis (*F. L. Hupprich,* Jl. Hlth & Phys. Ed.); Movie Discussion Guides, Defense Digest Series;—June 252,254. . . . Relating Modern Language Study to the Environment (*Laura Johnson,* Sch. Rev.); Visualizing a Unit in Social Studies (*A. D. Kramer,* Ohio Sch.)—Sept. 298. . . . Talk about Films (*Philip McConnell,* Jl. Adult Ed.)—Nov. 389.

Research and Evaluation

Teaching Conservation of Natural Resources through Motion Pictures (*Effie Bathurst,* Sec. Ed.); Visual Aids Handbook (State College Wash.)—Feb. 67. . . . Sound Films for Reading Programs (*H. A. Gray,* Sch. Exec.); Review of Educational Research in Visual Education (*Edgar Dale-C. F. Hoban, Jr.,* Ency. Ed. Res.); Audio-Visual Aids and the Democratic Process (*Etta Schneider,* Ed.); Silent vs. Sound Films (*M. H. Cowan,* High Pts.); Relation of Reading to Other Forms of Learning (*Edgar Dale,* Amer. Council on Ed.); Relative Value of Sound and Silent Motion Pictures in Science Teaching (*R. W. Maneval,* Sci. Ed.); Educational Motion Pictures Evaluated by Children (*Florence Taylor,* Ed.); Criteria for Production and Selection of Visual Aids (*David J. Goodman,* Ed.)—Apr. 174-6. . . . Study of a Microprojector as a Teaching Aid (*Edith Brechbill,* Sci. Ed.))—Sept. 298. . . . Evaluation and Use of Sound Films (*H. A. Gray,* El. Sch. Jl.); Teacher-Pupil Appraisals of 150 Science and Mathematics Films (*Lyle F. Stewart,* Sch. Sci. & Math.)—Dec. 431.

Teacher Training

Some First Steps (*W. Gayle Starnes,* Scholastic)—Jan. 30. . . . Adequate Training for a Director of Audio-Visual Education (*James D. Finn,* Ed.); A Neglected Factor in the Use of Audio-Visual Aids (*W. Gayle Starnes,* Ed.)—Apr. 176. . . . Need for Teacher Training in Visual Education (*R. R. White,* Bul. Natl. Assn. Sec. Sch. Prin.)—Sept. 298.

Excursions, Museums, Exhibits, Pictures, Maps, Cartoons

Use of Maps in Classroom (*Arthur Carthew,* Bus. Ed. World); The Map as Educational Instrument (*G. T. Renner,* Soc. Ed.); Pictures in a Small Library (*C. J. Gigani,* Wilson Lib. Bul.); Pictures Teach History (*C. Stegmeir,* Soc. Studies)—Jan. 30. . . . Enid's Museum Is Pride of High School Students (*J. O. Bumpus,* Jl. Ark. Ed.); Use of a Museum in Hygiene Classes (*L. J. Cahn,* Jl. Hlth. & Phys. Ed.); Technique of Exhibits (*Eliz. Eiselen,* Jl. Geog.)—Feb. 66. . . . Technique of the Field Trip (*L. W. Kindred-O. W. Stephenson,* Soc. Ed.)—Mar. 120. . . . The Museum of Natural History and the Public Schools (*Chas. Russell,* The Prin.); Field Trips Develop Community Interest (*L. R. Winchell,* Ed.); Excursions Need Direction (*Chas. Uger,* Sch. Exec.)—May 202-3. . . . Youth Hosteling (*J. J. Cline,* Ed. Meth.); Shifts in

Attitude Caused by Cartoon Caricatures (*R. Asher-S. Sargent*, Jl. Gen. Psych.)—June 254. . . . Visual Education and the Museum (*E. L. Hulker*, N. Y. Ed.)—Sept. 300. . . . A Study of Children's Responses to Geography Pictures (*K. E. Vayette*, Jl. Geog.)—Nov. 388. . . . Use of the Spot Map in Science Classes (*O. A. Engstrom*, Cal. Jl. Sec. Ed.); Three-Dimension Pictures: the Portable Educational Diorama (*C. E. McCafferty*, Neb. Ed. Jl.)—Dec. 431.

Photography and School-Made Visual Aids

Local Industries Help Make Film Material (*H. U. Wood*, Occupations); Teaching with School-made Films (*W. G. Hart*, Scholastic); Lantern Slides Teach Business (*A. Selwyn*, Nat. Sch.); Why Not a Movie? (*R. E. Johnson*, Design)—Jan. 20. . . . Producing a School Movie (*L. B. Sands*, Sch. Exec.); Pupil-Made Lantern Slides (*Claire Mulville*, Conn. Tchr.); Class Makes Movie of "Julius Caesar" (*D. B. Cox*, Jl. Ark. Ed.); Making Lantern Slides (*Jack Wright*, Cam. Craft) —Feb. 66. . . . Learning Safety through Making Movies (*W. G. Hart*, Safety Ed.); Production of School Public Relations Films (*H. R. Finch-E. D. Child*, Sch. Mgmt.); Filming of Classroom Activities Adds Interest (*H. H. Dittbrenner*, Minn. Jl. Ed.); Camera Club's Contribution to Visual Instruction (*R. E. Brant*, Ed.); The Zoo Goes to School (*F. W. Trevor*, Ed.)—Apr. 176. . . . New Developments in Photography (*C. A. Savage*, Sch. Sci. & Math.); Teaching with a Camera (*R. A. Gaiser*, N. Y. Ed.)—June 252. . . . Evander Produces Its Own Movies (*David Schneider*, High Pts.)—Oct. 343. . . .Featuring Photography (*J. B. MacHarg*, Nat. Sch.); Composite Stereography (*J. P. Foley*, Jl. Exper. Psych.)—Dec. 431.

Photoplay Appreciation and Social Effects of Films

A Unit on Propaganda Analysis (*F. A. Gage*, Soc. Ed.); Commission on Human Relations: Work and Relation to Defense of Democracy (*Alice Keliher*, Prog. Ed.)—Jan. 30. . . . "Fantasia" and the Children (*May Arbuthnot, Child.* Ed.); History in Commercial Motion Pictures (*R. T. Solis-Cohen*, Soc. Studies); "Several Students Had Seen the Picture" (*E. W. Mossman*, Chgo. Sch. Jl.)—Feb. 66. . . Reflections on Freedom of the Screen (*Roy Wenger*, Soc. Studies) —Sept. 300. . . . How the United Parents Association Regards Radio and Motion Pictures as These Affect Children (*Mrs. J. Schechter*, High Pts.); Group Discussion Guide (Dept. Sec. Ed. NEA)—Oct. 343-345.

Recordings and Radio

An Experiment with Phonograph Records (*Effie Bathurst*, N. Y. Ed.); Recordings: A Significant Aid in Teaching (*J. R. Miles-I. Keith Tyler*, Scholastic); Experience Transcribed (*Paul C. Reed*), Teacher Training in the Use of Radio (*M. U. Bildersee*), The Central Sound System in the School (*K. G. Bartlett*), Radio for the Intelligent (*F. E. Hill*), Radio the Master Teacher (*Janet Conklin*) (N. Y. Ed.)— June 252-254. . . . Symposium: The Effective Use of Radio in Education (Sec. Ed.); I Listen to Children (*Mae O'Brien*, Tchr. Coll. Rec.); Calif. Jl. Sec. Ed.—Radio issue; Radio-Listening Habits of Jr. High Pupils (*R. V. Burkhard*), A Secondary School Radio Workshop, (*G. M. Allen*) (Bull. Natl. Assn. Sec. Sch. Prin.)—Sept. 298-300; . . . Education via FM Radio Programs (*W. B. Levenson-L. A. Randall*, Sch. Exec.); The Library of Congress Radio Research Project (*C. T. Harrell*, A.L.A. Bull.)—Oct. 343. . . . Adapting the Radio to the Classroom (*A. Y. King*, Soc. Ed.)—Dec. 431.

Library and Visual Aids

New Aids for Familiar Purposes (*Mary Townes*, AL.A. Bull.)—Jan. Jan. 30. . . . Place of Librarian in Visual Program (*Bess Landfear*, Cal. Jl.)—Apr. 176.

Sources of Materials

Free or Inexpensive Geographic Materials (*F. K. Branom*, Chgo. Sch. Jl.); Film Information Service (Bell & Howell)—Jan. 30. . . . Pan-Americana (*Lili Heimers*); Mathematics Films (*E. H. Hildebrandt*, Math. Tchr.); Living Films: Catalog of Documentary Films and Their Makers; Current Releases of Non-Theatrical Films—Mar. 121. . . . Films on War and American Policy (*Blake Cochran*, Amer. Council Ed.); Sources of Inexpensive Teaching Aids (*W. G. Hart*, News Letter); Visual and Teaching Aids in the Realm of Biology (*M. G. Cook*) —May 203. . . . Films Adapted to Teaching Conservation in the Elementary School (U. S. Office Ed.); Sources of Free Teaching Aids (*Ruth Holmes*); Safety Education (*Lili Heimers*)—June 271. . . . Aids for the Spanish Teacher (*Lili Heimers*); Audio-Visual Materials for Junior and Senior High School Reading (*K. E. Wheeling-J. A. Hilson*)—Sept. 300. . . . Sources of Supplementary Materials for Health Instruction (*N. M. Miner-A. H. Steinhaus*, Res. Qtrly.); Film Guide for Business Teachers (*C. Ettinger*, Jl. Bus. Ed.); Survey of Motion Picture Equipment in Colleges and High Schools (*N. D. Golden*); Sources of Visual Aids for Instructional Use in Schools (U. S. Office Ed.); Visual Aids in Vocational Education (*F. J. Coyte*, Ind. Arts & Voc. Ed.)—Oct. 345. . . . Some Audio-Visual Aids in Science (*J. J. Davis*, Va. Jl. Ed.); Problems of American Democracy (*J. J. Rellahan*); Films Made by Community Chests and Councils of Social Agencies; Films Produced by National Social and Health Agencies—Dec. 432.

Book Reviews

A School Uses Motion Pictures (Tower Hill H. S. staff)—Feb. 68 . . . World-Wide Influence of the Cinema (*John E. Harley*)—Mar. 121 . . . American History on Parade (*E. J. Casey*); America at the Movies (*Margaret Thorp*)—May 203. . . .Fun at School (*B. F. Holland-G. M. McDaniel*); True Comics (Parents' Inst.)—June 271. . . . Students Make Motion Pictures (*F. E. Brooker-E. H. Herrington*); Motion Pictures in a Modern Curriculum (*R. Bell-L. F. Cain-L. A. Lamoreaux*)— School Recording Technique (*K. S. Van Dyke*)—Sept. 300. . . . The Film Index: a Bibliography (WPA Writers); Producing School Movies (*Eleanor Child-Hardy Finch*); Implications of the Motion Picture in Education (Mich. Ed. Assn.); Using Visual Aids (West. Wash. Col. Ed.)—Oct. 345. . . . How to Make Animated Cartoons (*Nat Falk*)—Dec. 432.

Experimental Research in Visual Education
(Conducted by DAVID GOODMAN)

Introduction to department—June 255. . . . Theories of Grade Placement of Motion Picture Film Materials (*Paul Z. Rummell*); A Critical Analysis of the Use of Educational Motion Pictures (*Abraham Krasker*) —Sept. 302-3. . . . The Production and Experimental Evaluation of a Series of 16mm Silent Films for Teaching Mathematics in Grade 7A (*Dominick Montelbano*); Visual-sensory Aids as Materials of Instruction in the Elementary School Systems of New Jersey (*G. W. Wright*)— Oct. 346-7. . . . Problems in the Use of Instructional Films (*E. E. Kirkpatrick*)—Nov. 392. . . . High School Science Students Preferences of Illustrative Materials (*Carrol C. Hall*)—Dec. 434.

IN AND FOR THE CLASSROOM
(Conducted by WILBER EMMERT)

Expanding the Classroom.....Jan. 18
Opaque Projecter as One Aid in Teaching General Science (*W. H. Durr*)—Filmstrip Depicts Physical Aspects of Visual Education (*William S. Green*).....Feb. 72-4
Originally Designed Lantern Slides for Stage Scenery (*Anna J. Thompson*).....Apr. 168
Visual Aids and Bird Study (*Harriet Kimmel*).....May 216

NEWS AND NOTES
(Conducted by JOSEPHINE HOFFMAN)

Grant for Motion Picture Research—Experiment to Revive Old Photoplays—School Broadcast Conference—N.Y.U. Film Library—More Cooperative Film Libraries Established—Use of Modern Art Museum Programs Increasing —Series of Local Conferences—School Recordings Evaluated—Motion Pictures and Defense Activities.....Jan. 34-37
Southern California Spring Conference—Visual Education in Tennessee—Visual Aids in Mathematics Demonstrated— Museum Free Film Programs—Visual Aids in the CCC— New Film Courses—"Ten Best" 1940 Theatrical Films.....Feb. 82-3, 87
Third Annual Midwestern Forum on Visual Teaching Aids— Michigan Visual Conferences—Motion Picture Project Studies—Maine Cooperative Film Library—Information Exchange Service—Bureau of Mines Films Go to Latin America—American Film Center Grant.....Mar. 128-30
Audio-Visual Conferences—Sound Slide-Films for Experimental Use—Annual Convention of Non-Theatrical Film Group —Library Film Forums—Films for Alabama Schools— Denver Radio Conference.....June 258-60
Museum Kodachrome Slide Series—Tennessee Colleges to Have Visual Conferences—Virginia Audio-Visual Program—Visual Aids Loaned by Illinois Museum—SMPE Fall Meeting—Sound Films aid in Defense Training..Sept. 308-9
Southern Conference on Audio-Visual Education—District Meetings of Georgia Audio-Visual Group—Iowa Visual Conference—Architecture of the Home Visualized....Oct. 360-1
Visual Programs at State Teachers Meetings—Pasadena Visual Service Moves—Latin-America Cultural Relations Program—Disney Studios Produce Training Films....Dec. 440-1

SCHOOL-MADE MOTION PICTURES
(Conducted by HARDY R. FINCH)

Second Conference on Educational Production of Motion Pictures.....Jan. 26
Housing in Flint—School Film reports—The Motion Picture Goes to School (booklet).....Feb. 78-80
Purdue University Engineering Films, and others.....Mar. 122-3
Shooting Script of "Gold! Gold! Gold!".....Apr. 210
Summary of School Film Production—Notes.....June 256-7
College Program in Motion Picture Production and Writing— Making School Movies (booklet)—Proceedings of Second Conference on Educational Production of Motion Pictures —Film Reports—University-Produced Color Film.....Sept. 304-6
Film Production on National Council of Teachers of English Program—Annual "Make Your Own Movies" Contest— Reports on Films—Question Box.....Oct. 348-51
Suggestions for Camera Club—Course in Production of School-Made Films—Film Reports—Question Box.....Nov. 398-01
Reports on Films—Question Box.....Dec. 436-8

NEW FILMS OF THE MONTH
(Conducted by DON WHITE)

Monthly Evaluations of Educational Films by a Teacher Committee, on following pages: Jan. 32-3, Feb. 84, 86, Mar. 124-6, Apr. 178-9, May 212-13, June 262-4, Sept. 310-11, Oct. 356, 358-9, Nov. 402, 404-5, Dec. 442.

CURRENT FILM NEWS

Announcements and brief descriptions of new films, with sources, and of new producing and distributing services, on following pages: Jan. 38, 40—Feb. 88, 90—Mar. 132, 134, 138—Apr. 182—May 220, 222—June 266, 268—Sept. 314, 316—Oct. 362, 366—Nov. 408, 410. Dec. 444.

AMONG THE PRODUCERS

SVE Kodachrome Slide Catalog—DeVry Movie News—Music Note Pitch Teaching Device—Vocational Guidance Slidefilm— 2x2 Slide Sets.....Jan. 42
Pictures That Reconstruct the Past—Audio-Visual Teaching Aids Shown in New Book—Illustrated Reference Material for Classrooms—New 35mm Kodak Ektra—Color Film Slides on Art—Poetry Records—Two B&H Magazine Cameras Now Have 5 Speeds—A Bit of DeVry History..Feb. 92, 94
Five Sound Kodascopes—Filmstrips on Safety—New Picture Unit on Americanism—Developments at Bell & Howell— Slidefilms for Pilot Training.....Mar. 136-138
New Erpi Products—New Filmstrip Subjects—U. S. Specifies Film Conditioning—Portable Amplifier System—History of Typewriter in Filmslides.....Apr. 180
New Recording Firm in Educational Field—Da-Lite Announces Lower Screen Prices—Presto Turntable.....May 223
Filmstrips on Vocational Guidance—First Two Recorded Lectures Released—Filmslide on Flag Usage—Manual on Opaque Projection—Shakespeare Album Offered by RCA —DeVry Elects New Officers.....June 270-1
Keystone Units on the Americas—Radiant Screen Enters Educational Field—Bell & Howell Slide Master—Slidefilms on Art in Sound and Color—New Eastman Camera —Ampro Tri-Purpose Amplifier—Recordings for Schools —Posthumous Honor to Herman A. DeVry—Radio Recordings Series.....Sept. 318-9
Victor Arc Lamp Projector—Spanish Filmstrips—Ampro's New Catalogue—Armour Slidefilm Presentation—RCA Album of English Lyric Verse—Minicolor Prints—DeVry Processing Formula—Slidefilms for Defense Training— Shades for Darkening Classrooms—Catalog of Electrical Transcriptions.....Oct. 364, 366
Demonstration Set of SVE Kodachromes—Color Copying Service—Slide on Electrical Transcription Making—New Kodaslide Projector.....Nov. 410

MISCELLANEOUS

Hand-Made Lantern Slides (*Ann Gale*)—Teaching Spelling (Feb. 65); Bird Study (June 243); Current History (Sept. 295); Travel Stories (Oct. 342); The Story of the Pilgrims (Nov. 390).
Quick-Check Your Slide Sets (*William J. Becker*).....Mar. 127
Summer Courses in Visual and Audio-Visual Instruction 1941.....Apr. 162, May 214, June 260
Nebraska Has Visual Education Clinic—ANFA Convention..Apr. 167
Third Midwestern Forum on Visual Teaching Aids..... 170
Films for North Dakota Schools (*Helen Walseth*).....May 201
Visual Education in Rural Schools..... 201
A Workshop on the Production of Visual Aids..... 208
A New Source of Visual Material for Teaching the History of Art (*Donald N. Wilber*).....June 250
News Highlights of 1941 in Castle Film.....Nov. 407
High Honor Bestowed on Late Herman A. DeVry.....Dec. 444

More and More

KEYSTONE Handmade-Lantern-Slide Materials

Are Being Used in Teaching

Keystone Etched Glass is mud-ground, with a satiny surface that has no superior in the possibilities of even, smooth projections.

Keystone Lantern-Slide Crayons are free from all wax, which is found in all ordinary colored pencils or crayons; they have fast, true colors and a composition that will stand the heat of a lantern — the only lantern-slide crayons or pencils made for the purpose. Results, colorful and beautiful projections.

Keystone Lantern-Slide Ink is the successful result of years of experimentation to get a coating that would resist heat and produce durable, attractive high colors.

Keystone Cellophane and Carbon Paper are the approved products of a long period of investigation and experimentation to get a durable, attractive cellophane and a carbon paper that would produce clean clear-cut copy on the screen.

All other items in the list of endorsed Keystone Handmade-Lantern-Slide Materials are of the best and highest quality, thus assuring a high level of interest on the part of the pupil and, therefore, the effective and continued use on the part of the teacher.

•

Directed Uses:

"**The Keystone Method of Teaching Reading**" provides 100 drawings of primary subject matter for etched-glass slides.

"**American History on Parade**" provides more than 300 drawings for handmade slides on American history.

Either of these publications will be sent postpaid upon receipt of $1.25.

Keystone View Company

Meadville, Penna.

HERE THEY ARE

A Trade Directory for the Visual Field

FILMS

Akin and Bagshaw, Inc. (3)
1425 Williams St., Denver, Colo.

Bailey Film Service (3, 4)
1651 Cosmo St., Hollywood. Cal.
(See advertisement on page 440)

Bell & Howell Co. (3)
1815 Larchmont Ave., Chicago
(See advertisement on page 417)

Biological Institute (1)
Camac & Berks St., Philadelphia, Pa.
(See advertisement on page 438)

Brandon Films (3)
1600 Broadway, New York City
(See advertisement on page 441)

Castle Films (3)
R C A Bldg., New York Citv
(See advertisement on page 413)

DeVry School Films (3, 4)
1111 Armitage Ave., Chicago
(See advertisement on inside front cover)

Dudley Visual Education Service (1)
736 S. Wabash Ave., Chicago
4th Fl., Coughlan Bldg.
Mankato, Minn.

Eastman Kodak Stores, Inc. (3)
Kodascope Libraries
356 Madison Ave., New York City

Eastman Kodak Stores, Inc. (3)
1020 Chestnut St., Philadelphia, Pa.
606 Wood St., Pittsburgh, Pa.

Edited Pictures System, Inc. (3)
330 W. 42nd St., New York City

Erpi Classroom Films, Inc. (2, 5)
35-11 35th Ave., Long Island City, N. Y.

Films, Inc. (3)
330 W. 42nd St., New York City
64 E. Lake St., Chicago
314 S. W. Ninth Ave., Portland, Ore.

Fryan, V. L. (2)
2400 Chardon Rd., Euclid, O.
(See advertisement on page 434)

General Films, Ltd. (3, 6)
1924 Rose St., Regina, Sask.
156 King St., W. Toronto

Walter O. Gutlohn, Inc. (3)
35 W. 45th St., New York Citv
(See advertisement on page 441)

Harvard Film Service (3, 6)
Biological Laboratories,
Harvard University, Cambridge, Mass.

Heidenkamp Nature Pictures (1)
538 Glen Arden Dr., Pittsburgh, Pa.
(See advertisement on page 440)

Hoffberg Productions, Inc. (2, 5)
1600 Broadway, New York City

Ideal Pictures Corp. (3, 6)
28 E. Eighth St., Chicago, Ill.
(See advertisement on page 434)

Independent Motion Picture Exch. (2)
4726 S. Packard Ave., Cudahy, Wis.

Knowledge Builders Classroom Films
130 W. 46th St., New York City (2, 5)

Lewis Film Service (3)
216 E. 1st St., Wichita, Kan.
(See advertisement on page 437)

Manse Film Library (3)
1521 Dana Ave., Cincinnati, O.
(See advertisement on page 440)

Mogull's (3)
61 W. 48th St. New York City
(See advertisement on page 440)

Mutual Film Service (2, 5)
282-4 So. Stowe St., Virginia, Ill.
(See advertisement on page 440)

Post Pictures Corp. (3)
723 Seventh Ave., New York City

Douglas D. Rothacker
729 Seventh Ave., New York City

Universal Pictures Co., Inc. (5)
Rockefeller Center, New York City
(Se advertisement on page 437)

Visual Art Films (2)
1303 Porterfield St., Pittsburgh, Pa.
(See advertisement on page 434)

Visual Education Service (3)
131 Clarendon St., Boston, Mass.

Vocational Guidance Films, Inc. (2)
Old Colony Bldg., Des Moines, Ia.

Williams, Brown and Earle, Inc. (3, 6)
918 Chestnut St., Philadelphia, Pa.

Y.M.C.A. Motion Picture Bureau (3)
347 Madison Ave., New York City
19 S. LaSalle St., Chicago
351 Turk St., San Francisco, Cal.
1700 Patterson Ave., Dallas, Tex.

MOTION PICTURE MACHINES and SUPPLIES

The Ampro Corporation (3)
2839 N. Western Ave., Chicago
(See advertisement on page 439)

Bell & Howell Co. (3)
1815 Larchmont Ave., Chicago
(See advertisement on page 417)

DeVry Corporation (3, 6)
1111 Armitage St., Chicago
(See advertisement on inside front cover)

Eastman Kodak Stores, Inc. (3)
Kodascope Libraries
356 Madison Ave., New York City

Eastman Kodak Stores, Inc. (3)
1020 Chestnut St., Philadelphia, Pa.
606 Wood St., Pittsburgh, Pa.

General Films, Ltd. (3, 6)
1924 Rose St., Regina, Sask.
156 King St., W. Toronto

Holmes Projector Co. (3, 6)
1813 Orchard St., Chicago
(See advertisement on page 442)

Ideal Pictures Corp. (3, 6)
28 E. Eighth St., Chicago
(See advertisement on page 434)

RCA Manufacturing Co., Inc. (2)
Camden, N. J.
(See advertisement on page 433)

S. O. S. Cinema Supply Corp. (3, 6)
636 Eleventh Ave., New York City

Victor Animatograph Corp. (3)
Davenport, Iowa
(See advertisement on inside back cover)

Visual Education Service (3)
131 Clarendon St., Boston, Mass.

Williams, Brown and Earle, Inc. (3, 6)
918 Chestnut St., Philadelphia, Pa.

SCREENS

Da Lite Screen Co.
2717 N. Crawford Ave., Chicago
(See advertisement on page 435)

Eastman Kodak Stores, Inc.
1020 Chestnut St., Philadelphia, Pa
606 Wood St., Pittsburgh, Pa.

Radiant Mfg. Corporation
1140-46 Superior St., Chicago
(See advertisement on page 443)

Society for Visual Education, Inc.
100 E. Ohio St., Chicago, Ill.
(See advertisement on outside back cover)

The Stanley Bowmar Co.
2929 Broadway, New York City

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa.

SLIDES AND FILMSTRIPS

Edited Pictures System, Inc.
330 W. 42nd St., New York City

Ideal Pictures Corp.
28 E. Eighth St., Chicago, Ill.
(See advertisement on page 434)

Keystone View Co.
Meadville, Pa.
(See advertisement on page 447)

Radio-Mat Slide Co., Inc.
1819 Broadway, New York City
(See advertisement on page 441)

Society for Visual Education, Inc.,
100 E. Ohio St., Chicago, Ill.
(See advertisement on outside back cover)

Spindler & Sauppe Inc.
86 Third St., San Francisco, Cal.
(See advertisement on page 440)

The Stanley Bowmar Co.
2929 Broadway, New York City

Visual Education Service
131 Clarendon St., Boston, Mass.

Visual Sciences
Suffern, New York
(See advertisement on page 440)

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa

STEREOPTICONS and OPAQUE PROJECTORS

Bausch and Lomb Optical Co.
Rochester, N. Y.
(See advertisement on page 414)

DeVry Corporation
1111 Armitage Ave., Chicago
(See advertisement on inside front cover)

Eastman Kodak Stores, Inc.
Kodascope Libraries
356 Madison Ave., New York City

Eastman Kodak Stores, Inc.
1020 Chestnut St., Philadelphia, Pa.
606 Wood St., Pittsburgh, Pa.

General Films Ltd.
1924 Rose St., Regina, Sask.
156 King St., W. Toronto

Society for Visual Education, Inc.
100 E. Ohio St., Chicago, Ill.
(See advertisement on outside back cover)

Spencer Lens Co.
19 Doat St., Buffalo, N. Y.
(See advertisement on page 416)

Williams, Brown and Earl, Inc.
918 Chestnut St., Philadelphia, Pa.

REFERENCE NUMBERS

(1) indicates 16mm silent.
(2) indicates 16mm sound.
(3) indicates 16mm sound and silent.
(4) indicates 35mm silent.
(5) indicates 35mm sound.
(6) indicates 35mm sound and silent.

Continuous insertions under one heading, $2.00 per issue; additional listings under other headings, $1.00 each.

An invitation—

VICTOR 16 MM

VICTOR ANIMATOGRAPH CORPORATION

MANUFACTURERS OF
16 MM MOTION PICTURE CAMERAS & PROJECTORS

DAVENPORT, IOWA
U. S. A.

To Administrators Everywhere –

If "accomplishment" is a creed with you – as it has been with us here at the Victor factory over the past 32 years – you can understand why Victor Sound Motion Picture Projectors have never had an equal in quality, regardless of price.

This "Victor creed of accomplishment" has been valued so highly that it is quickly recognized in the many patented exclusive features – the finer materials – the superb craftsmanship – and the resulting superior sound and professional quality of the pictures it reproduces.

If you have not had the opportunity to see the Victor Animatophone – or to hear it – we sincerely invite you to request a demonstration from our factory-trained men – one of whom is close by in your territory.

Your request will be personally appreciated and directed.

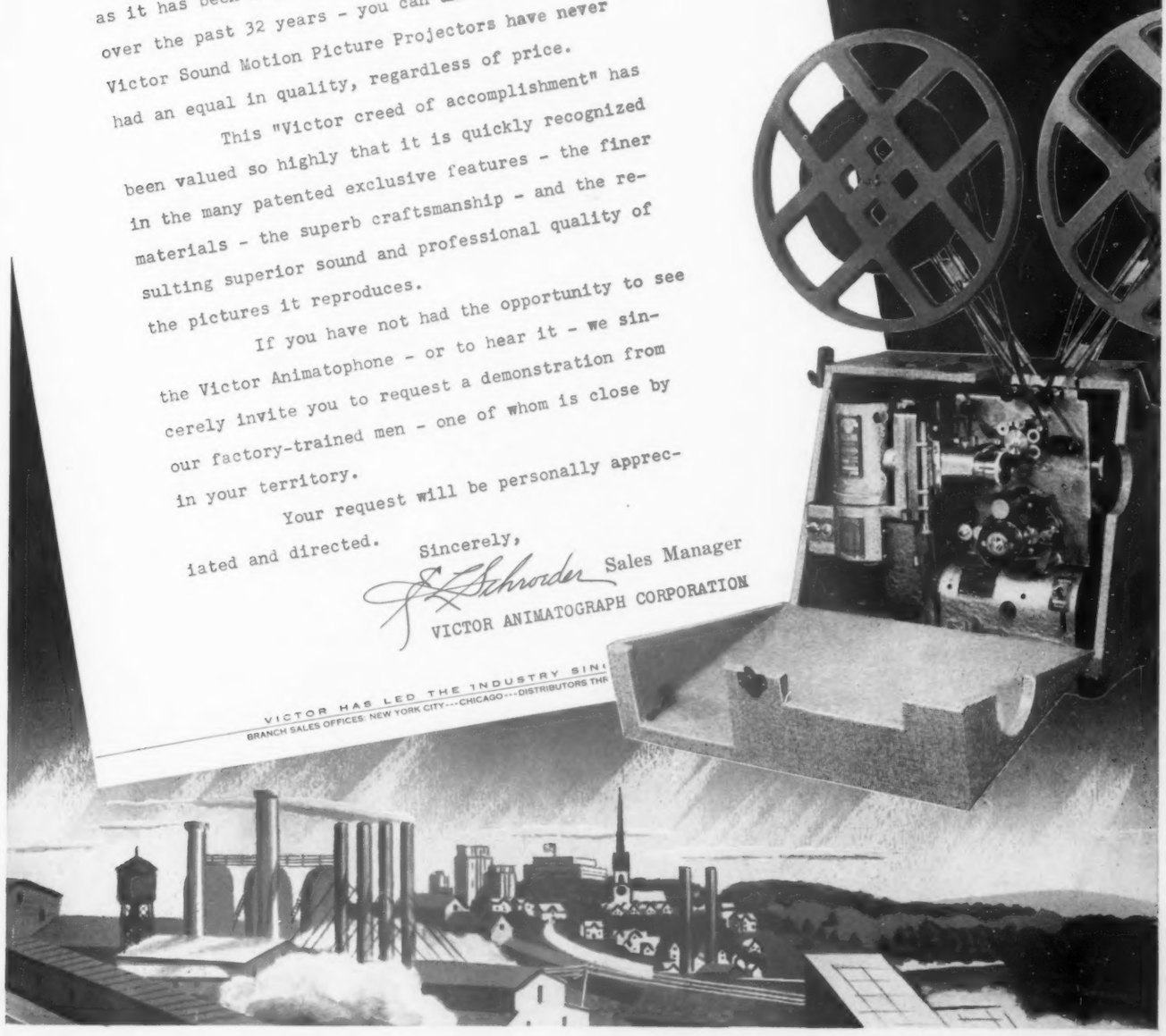
Sincerely,

J. L. Schroder Sales Manager

VICTOR ANIMATOGRAPH CORPORATION

VICTOR HAS LED THE INDUSTRY SIN

BRANCH SALES OFFICES: NEW YORK CITY---CHICAGO---DISTRIBUTORS THR



A FEW OF THE MANY SUBJECTS NOW AVAILABLE

Vocational Training

Each of the following Picturols visualizes step-by-step instruction on the subjects covered. No manual is required as subtitles in the film give full information.

Auto Mechanics, Part I
Auto Mechanics, Part II
Brick and Stone Masonry
Cabinetmaking
Carpentry
Cement Finisher
Electrical Workers
General Farming, Part I
General Farming, Part II
Highway Jobs
Machine Shop Mechanics
Molding and Coremaking
Painters and Decorators
Patternmaking
Plasterers
Plumbers and Steam Fitters
Sheet Metal Work
Structural Steel Workers
Welding As an Occupation

Price of each filmstrip, no manual **$2.00**

Electric Welding

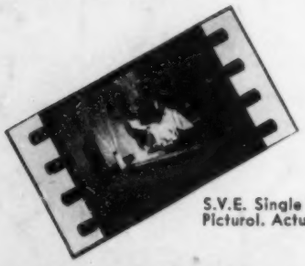
This series of nine filmstrips, accompanied by manuals, portrays comprehensively the application of electric welding to construction of products and structures.

Arc Welded Construction
Brief Discussion of the Shielded Arc
The Shielded Arc Process
Greater Profits in Manufacturing by Redesign
Better Buildings and Structures at Lower Cost by Electric Welding
Building Better Pipe Lines Faster and at Less Cost
Surfacing by Electric Welding
Automatic Arc Welding by the Electronic Tornado
Safety and Health in Arc Welding

Price of each filmstrip with manual **$2.00**
Complete set of 9 rolls... **$17.50**

Vocational Guidance

Forty-four filmstrips on Vocational Guidance for Junior or Senior High Schools are also available. Ask for listings.



S.V.E. Single Frame Picturol. Actual size.

For Vocational Training

—USE EFFICIENT AND ECONOMICAL PICTUROLS

The value of S.V.E. Picturols in visual education for all fields of study has been proved over a twenty-year period. The Picturols listed here on Vocational Training are recent additions. Many of them were taken in vocational schools co-operating with the defense program. Each Picturol consists of a 35 mm. filmstrip containing a series of still pictures, which the whole class can view for as long a time as necessary to insure complete understanding.

Free *Write today for the S.V.E. Picturol Catalog containing the world's largest listing of filmslides and for the new Kodachrome Library Catalog, which lists hundreds of beautiful full-color 2" x 2" slides. Also ask about S.V.E. Projectors. Write Dept. 12ES.*

SOCIETY FOR VISUAL EDUCATION INC.
100 EAST OHIO STREET CHICAGO · ILLINOIS

MANUFACTURERS · PRODUCERS · DISTRIBUTORS OF *Visual Aids*